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THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

The weekly newspaper for pharmacy and all sections of the drug, pharmaceutical and fine chemical, cosmetic, and allied industries

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The
CHEMIST AND DRUGGIST

Volume 173 APRIL 9, 1960 No. 4182

End of Averaging in Sight

FULL PRICING IN ALL AREAS FROM MAY 1

SPEAKING at an area meeting of the National Pharmaceutical Union at Blackpool on April 3, Mr. J. Wright (deputy secretary of the Union) revealed that from May 1 there is to be full pricing of contractors' EC10 prescriptions in all areas.

This will complete the scheme announced last year (*C. & D.*, July 25, 1959) for the reintroduction, by gradual stages, of full pricing of all prescriptions. The first stage, it will be recalled, was that chemist contractors who dispensed not more than 500 prescriptions a month had their prescriptions fully priced. Later those who dispensed not more than 1,025 prescriptions during April 1959 were brought within the same group. The Ministry then announced that the timing of further stages in the scheme would depend upon the ability of the pricing bureaux to cope with the increased work. When the Joint Pricing Committees were constituted on June 14, 1948 it was found that the resources they had inherited were incapable of dealing with the 60 million National Health Insurance prescriptions annually. At the end of the war many pricing bureaux were greatly in arrears with pricing, and "averaging" was introduced. It was continued at the outset of the National Health Service, when the number of prescriptions presented an intractable problem. The Joint Pricing Committees extended their staffs and opened new bureaux, and by the end of 1954 the arrears were overtaken, though the system of averaging was maintained.

Narcotics

ESTIMATED REQUIREMENTS IN 1960

FURTHER information from the authorities in the United Kingdom has been requested by the Drug Supervisory Body of the United Nations concerning the estimate for diacetylmorphine submitted for 1960. That information is given in the Estimated World Requirements of Narcotic Drugs in 1960 (H.M. Stationery Office, five shillings). The following figures taken from the report give the United Kingdom requirements (in kilos) with world figures in parentheses. Morphine 16,700 (123,510); diacetylmorphine 55 (90); oxycodone 1 (595); hydrocodone 2 (1,494); hydromorphone 0·5 (130); thebaine 251 (3,099); codeine 9,500 (106,621); ethylmorphine 155 (8,499); pholcodine 350 (1,316); dihydrocodeine 40 (3,213); cocaine 125 (2,027); pethidine 1,200 (16.293); methadone 80 (652); dipipanone 40 (65); phenadoxone 20 (34); dextromoramide 4 (383); levorphanol 4 (48); diethylthiambutene 5 (13). The estimated requirements of the Republic of Ireland are: morphine 16 kilos; diacetylmorphine 0·5 kilos; oxycodone 50 gm.; hydrocodone 50 gm.; hydromorphone 50 gm.; codeine 75 kilos; ethylmorphine 750 gm.; pholcodine 5 kilos; dihydrocodeine 50 gm.; cocaine 5·5 kilos; pethidine 60 kilos; methadone 3 kilos; dipipanone 4 kilos; phenadoxone 100 gm; normethadone 1 kilo; dextromoramide 2 kilos; levorphanol 250 gm.; diethylthiambutene 600 gm.

"Development Districts"

INDUCEMENTS TO MANUFACTURERS

MANUFACTURING establishments throughout Great Britain have received a letter from the Board of Trade informing them of special inducements to expand in "Development Districts" [areas where unemployment is persistently high]. The letter, accompanied by a leaflet called "Expanding Industry" draws attention to the provisions of the Local Employment Act which came into force on April 1. The list of "Development Districts" is subject to constant review and, in addition to those places already announced and listed in the leaflet, it was announced in the House of Commons on March 31 that the following areas have been included: Plymouth, Gunnislake, and Saltash; Isle of Wight; Anstruther; and Dunfermline, Burntisland, Cowdenbeath and Inverkeithing. The letter points out that Industrial Development Certificates are readily granted in the listed districts, where labour is plentiful and the Government have powers to help firms by providing premises or by assisting in the cost of building them. Loans and grants are also available for projects that would provide employment.

Borrowman Trust

APPLICATIONS FOR A RESEARCH AWARD

MISS Agnes Borrowman, who was the proprietor of the pharmacy of Deane & Co., Clapham Common, left by her will a fund to be used for the furtherance of pharmaceutical education and research. The income has been accumulated since her death and her trustees (Sir Hugh Linstead and Dr. J. W. Fairbairn) are now inviting applications for the first award to be made under the trust deed. It is a research

PAST AND PRESENT: Mr. H. Humphreys Jones (former head of the Liverpool School of Pharmacy) among a group of students of the department of pharmacy, Liverpool College of Technology, on the occasion of the department's prize-giving (see p. 413). The students are, left to right, Mr. E. B. Stanley, Miss A. M. Sistern, Mr. A. H. Walsh, Miss R. A. Ashcroft, Mr. J. Lerman, and Mr. E. H. D. O'Brien.

award of £500 a year for two years for full-time research undertaken in a school of pharmacy in Britain by a pharmaceutical chemist or graduate in pharmacy. Particulars of the award have been sent to all schools of pharmacy. The grant is normally tenable for two years on annual appointment, but the holder of a grant who for exceptional reasons has been unable to complete his research during the two years may apply for an extension of the award for a further period not exceeding one year. Applications must be made in writing to The Trustees, The Agnes Borrowman Trust, 17 Bloomsbury Square, London, W.C.1, on or before May 31, and must include the following information: Age; details of education and qualifications; the particular branch of study in which the applicant desires to engage in research; the institution at which he desires to work, with evidence that the institution in question is prepared to accept him for the purpose; the names of three referees, one of whom must be the head of the school of pharmacy in which the applicant received his training; any other relevant information. The applicant may be called upon to give oral evidence of his knowledge and ability. Applicants are also required to contact the head of the school of pharmacy in which they wish to work.

Travelling Fellowships

CARLSBERG-WELLCOME AWARDS

APPLICATIONS are being invited for the Carlsberg-Wellcome Travelling Research Fellowships, 1960-61, the object of which is to encourage co-operation, on an exchange basis, between Danish and British research workers in any branch of the natural sciences which has a bearing upon human and animal medicine. One Fellowship is awarded annually to a candidate from the United Kingdom for a year's work in Denmark and one to a Danish candidate for a year's work in the United Kingdom. The stipend may range from £900 to £1,300 per annum (or the equivalents in Danish Kroner), travelling and some incidental expenses being provided in addition. The tenure of the awards starts in September 1960. Inquiries from candidates in the United Kingdom should be addressed to the assistant scientific secretary of the Wellcome Trust, 52 Queen Anne Street, London, W.1, from whom further particulars may be obtained. Completed applications must be submitted by April 30.

Newcastle Conference

SESSIONAL SUBJECTS

THE title of the chairman's address to the opening session of the British Pharmaceutical Conference, to be held at Newcastle-upon-Tyne, September 5–9, is "Academic Research and the Five Freedoms." The chairman of the Conference is Professor W. H. Linnell. The subject for the symposium session on September 8 is to be "Chemical Disinfection" and the discussion is being opened by Drs. S. E. Jacobs, J. G. Davis, A. M. Cook, and Mr. A. H. Walters. The subject for the professional session on September 6 is to be "Change to the Metric System in Pharmaceutical Practice" and the discussion is being opened by Dr. K. R. Capper. The subject for the second professional session (on September 9) is to be "Professional Responsibilities of the Pharmacist in the Supply of Medicinal Substances" and the discussion is being opened by Mr. C. G. Drummond, Professor A. D. Macdonald, and Mr. H. Noble.

Rheumatism Survey

VALUE TO EMPLOYER AND STAFF

A SURVEY is to be made of British industry to investigate—among other problems—the incidence of rheumatic conditions among the working population and how much disability and loss of time they cause. The Empire Rheumatism Council is financing the necessary survey, and it is under the direction of Dr. J. J. R. Duthie, Edinburgh University, the director of the rheumatic unit in Edinburgh. More than 730,000 persons employed in Britain claim sickness benefit each year because of rheumatism. The survey is aimed at discovering the incidence of rheumatic complaints in specific industries; estimating their costs, both to the sufferers and to the employer, investigating the importance of working conditions in aggravating rheumatic complaints; examining industrial processes in order to reduce the incidence of such complaints; and discovering suitable occupations for disabled workers.

Diseases of Animals Act

STATUTORY REPORT FOR 1959

THE list of approved disinfectants under the Diseases of Animals Orders at the end of 1959 comprised eighty disinfectants produced by forty-two manufacturers and sold under 299 different names. That information is given in the statutory Return of Proceedings under the Diseases of Animals Act, 1950, for the year 1959 (H.M. Stationery Office, price sixpence). The report states that at the beginning of 1959 eight licences to manufacture veterinary sera and vaccines were in force in addition to five licences to import such preparations. During the year two additional manufacturing licences and three additional import licences were granted. One manufacturing licence and one import licence were allowed to lapse. Some of the existing licences were extended to cover additional products.

Retail Sales

BOARD OF TRADE FIGURES

RECENTLY issued Board of Trade figures show that sales of chemists' goods by independent retailers in January were 32·6 per cent. lower than in December 1959, but 3 per cent. higher than in January 1959. Multiple retailers' sales were 50·8 per cent. lower in January than in December 1959 but 6 per cent. higher than in January 1959. Sales by Co-operative societies were 37·8 per cent. lower in January than in December 1959. The figures do not allow for receipts under the National Health Service.

IRISH NEWS

THE REPUBLIC

Wool Wadding

CUSTOMS DUTY IMPOSED

THE Imposition of Duties (No. 87) (Wool Wadding) Order, 1960, which came into operation on March 11, extends the scope of duty at Tariff Ref. No. 64/3 (cotton wool, etc.), to include wadding made wholly or partly of wool. The full rate of duty is 50 per cent. *ad valorem* but goods from the United Kingdom are charged at 33⅓ per cent. *ad valorem.*

Medical Representatives

ASSOCIATION'S ANNUAL MEETING

THE Irish Pharmaceutical and Medical Representatives' Association now has a membership of 237 (137 members, ninety associate members and ten under Part 2 of Register). That was revealed in the report of Mr. M. F. Walshe (secretary) at the annual meeting held in the College of Pharmacy, Dublin, on March 25. An appeal was made to members to support the first annual dance of the North Dublin Medical Society which is being held in Dublin hotel on May 6, while the report further urged all members to join the Chemists' Debating Society and attend all functions promoted by it. Mr. J. J. McKenna said he was glad to see such a representative attendance. Having paid tribute to the memory of two members who died during the year (Mrs. N. Mulholland and Mr. L. Martin), Mr. McKenna repeated a statement made by him at the Association's annual dinner that the Association did not recommend any particular members to companies advertising for representatives. Some Cork members had been under an impression that the Association had recommended members from the Dublin area to such companies, but he was happy to say that that erroneous impression had now been removed. The president appealed to members to take advantage of the reduced premiums for group membership under the Voluntary Health Insurance scheme. He reported that following the introduction of the levy on the importation of medicinal tablets a deputation had been received by the Department of Health and their views had been given careful consideration by senior officials. The report of Mr. P. Cummins (treasurer) disclosed a credit balance of £59. Messrs. Patrick Cummins (outgoing), John Sullivan, Malachy Silke and P. J. McGlenan were unanimously elected to fill vacancies on the committee, while Messrs. C. Roche and G. McMorrow were elected auditors. The president said that from his visit to Cork he was glad to see that the members there were taking an active interest in the Association. It was felt because of the inconvenience to Cork members in getting to Dublin that a branch should be formed in Cork. On the motion of Mr. T. Lyons, seconded by Mr. P. Duffy, it was unanimously agreed that such a branch, to be known as the Irish Pharmaceutical and Medical Representatives' Association, Cork Branch, should be formed under the aegis of the executive committee. Mr. James Meehan explained that there were between thirty-five and forty members in Cork. To mark their appreciation of the work being done by the president, Mr. Walshe, on behalf of the members, presented Mr. McKenna with a fountain pen.

THE NORTH

Associates' Section

MONTHLY MEETING OF COMMITTEE

THE monthly meeting of the committee of the Associates' Section, Ulster Chemists' Association, held in Belfast on March 21, unanimously agreed that the wages scale agreed at the joint council meeting held on February 9 should be ratified. The new scale comes into operation on April 18. Mr. H. M. Hamilton (chairman) presided at the meeting. A letter was read from Mr. H. W. McKeown tendering his resignation from the committee. The following were approved for associateship: *Pharmaceutical Chemists*, Messrs. S. J. McKay, G. McLarnon; *Unqualified Assistant*, Mr. I. D. Colhoun.

IRISH BREVITIES

A PAPER, by two African students, on "Pharmacy in Africa" is to be read at the College of Pharmacy, Dublin, at 8 p.m. on April 20. It will be followed by a film show. The function is under the auspices of the Irish Pharmaceutical Students' Association.

NEWS IN BRIEF

A JOINT committee has been set up by the Agricultural and Medical research councils to examine the consequences of feeding antibiotics to farm animals.

IN order to bring the Ministry of Health records up to date, Executive Councils have been asked to supply, before the end of June, details of all chemists, drug stores and appliance contractors who submitted prescriptions during 1959.

THE Soke of Peterborough Executive Council agreed on March 28 to ask if the Local Pharmaceutical Committee could help in the establishment of new pharmacies on estates now without them. A number of complaints had been made to the Council about the shortage of pharmacies.

THE Ministry of Pensions and National Insurance has issued a warning that a number of forged National Insurance stamps of the 18s. 2d. (man's) rate are in circulation, particularly in Southern England. Employers are warned that the only legal method of obtaining National Insurance stamps is by buying them at a Post Office.

AN alphabetical list of industries and products has been compiled by the Board of Trade to assist inquiries to locate the Government Department (and the Division or Branch within that Department) which is principally concerned with a particular industry or product. The index may be obtained from the Board of Trade Library, Horse Guards Avenue, London, S.W.1 (price 2s.).

TOPICAL REFLECTIONS

By Xrayser

A retail qualification

Your correspondence columns exhibit a state of disquiet and uncertainty in the matter of the present standards of qualification. The high standard demanded for the Society's diploma is being blamed for the difficulty in finding qualified managers, assistants and locums, and it is customary to hear that difficulty described as a "shortage." In so describing it, we are probably failing to appreciate the fact that we are on the threshold of great changes. In the period of depression that followed the first World War, many pharmacies were opened that were not absolutely necessary for the convenience of the public. There had been a large influx of new entrants to the register in 1920, and existing pharmacies were not in need of their services. It was inevitable, therefore, that there should be, in the conditions prevailing, a large increase in the number of units, some of them not economically justified. For many of them the working lifetime of the proprietor is drawing to a close, and there are no purchasers. The next decade is likely to see a progressive reduction in the number of registered premises, and the public will have to travel further for their medicines. With that trend extending over the country as a whole, the time is ripe for a survey of the pharmaceutical service of the future, and it would seem to be an appropriate occasion for a full consideration of a planned use of the forces available, having due regard to the needs of an area. Some form of limitation is overdue.

A thoughtful letter

There is, on p. 369, a most thoughtful letter from a correspondent who admits to being a non-pharmacist. You have, not inappropriately, headed the letter "A ringside view of the retail," for it is frequently asserted, with considerable truth, that the onlooker sees most of the game. Mr. Jordan makes many good points in his commentary, the weight of his argument being that professional pharmacy is taking a back seat while the stalls are occupied by "cameras, cosmetics, cutlery, etc." But, while agreeing with much of what Mr. Jordan says, I cannot quite see what his remedy is, for the trend of his argument seems to lead to only one conclusion, and that is a salaried service for the retail pharmacist. He writes: "If the prospective student of pharmacy could anticipate that he would in fact practise pharmacy and not be faced with the likely alternatives of an underpaid post in a hospital or of having to cut his brother's financial throat in self-defence by the exercise of business cunning in the selling of trumpery trifles, the number and quality of students might no longer be too low, nor would the length and technicality of the qualifying course be called in question." I should like Mr. Davis to expand his line of thought. A salaried service would be unlikely to be more richly rewarded than the underpaid hospital service, and the possibility of the Government rewarding the pharmacist, at this stage, for a reversion to pure pharmacy seems unlikely. What is the remedy? Anything that would restore professional pharmacy to its rightful place is worthy of serious consideration, but there are the hard facts of economics over all.

A link with the past

That there are considerations apart from those mentioned in my first paragraph for the inevitable closing of pharmacies is made clear by the article on pp. 362-63, dealing with the disappearance of yet another long-established business. In that example it is the changing face of the urban centre of a city that has contributed to the ending of a long record, and the demise of one more eighteenth-century pharmacy is matter for profound regret. So many have gone in recent years, and the atmosphere of such traditional homes of the old chemist and druggist is fast vanishing. Such pharmacies had character and distinction, and gave the impression that their function, first and foremost, was to deal with such commodities as drugs. It is a pity that the characteristic appearance of the pharmacy has changed so much in recent years, for the effect was impressive.

WHAT MAY BE ACCEPTED AS A DRUG

New report by Standing Joint Committee on Classification

A REVIEW of the principles governing the prescribing of "borderline" drugs and medicines has been carried out by the Standing Joint Committee on the Classification of Proprietary Preparations. The results have been published in a Report on Definition of Drugs (H.M. Stationery Office, price sixpence).

The review replaces the three reports made by the definition of drugs joint subcommittee of the Standing Medical and Pharmaceutical Advisory Committees in England and Wales, and the Medical, Pharmaceutical and General Practitioner Advisory Committees in Scotland.

Food and Drugs

The report states that decisions on the classification of borderline substances as foods or drugs or as substances other than foods or drugs must to some extent be arbitrary, but so far as possible should be given in accordance with the following general principles:

(i) Substances that are primarily nutritional and can be used by healthy persons to supplement their diet are to be classed as *foods*, even when they can and may be used for medicinal purposes, as for example dried milk, glucose, whole-meal bread;
(ii) foods manufactured specially for the treatment of disease, and for which naturally occurring foods cannot be substituted, are to be regarded as *drugs* and classified accordingly;
(iii) complex or compound preparations, *whether manufactured or natural products*, of which the main constituent or constituents are *foods* shall be classed as *foods*, even when they are a vehicle for drugs or medicinal agents; and
(iv) alcoholic beverages are not to be regarded as drugs.

A few preparations may properly be classed as foods in some circumstances and drugs in others. For example, glucose might be a drug when given by intravenous injection or as compressed tablets for the use of diabetics; the mode of its prescription would reveal its medicinal intention. Casilan could be regarded as a drug for patients when a high-protein salt-free diet was therapeutically necessary and could not be otherwise secured.

A number of substances have been reviewed in accordance with those principles and the following classifications made:

A. Preparations *not* to be classified as drugs.

(i) *Baby Foods, Milk Foods and Invalid Foods*

Allenburys diet
Ambrosia
Barlova
Benger's food
Bournvita
Colact
Cow and Gate foods
  Beurlac
  Brestol
  Cereal
  Daltose
  Frailac
  Milk foods, full-cream, half-cream and separated
  Hemolac
  Humanised milk food
  Lacidac full cream
  Modilac
  Peptalac
  Prenatalac
  Prolac
  Weylac
Dorsella
Farex
Full cream condensed milk
Homogenised foods
Lacta milk food
Lactagol
Lactogen
Malted milk
Mellin's food
Milo tonic food
M.O.F.
Oatrex
Ostermilk
Ovaltine
Robinson's barley and groats
Robrex
Sanatogen
Savory & Moore milk food
Sister Laura's food
Slippery elm foods
S.M.A. powder
Strained foods
Torbet lactic oats
Trufood follow-on food
Trufood humanised food
Trufood Secway
Vita cup

(ii) *Compound Foods of Specified Vitamin Content*

Bemax
Complan
C.V.B.
Marmite
Numol
Roboleine
Virol

(iii) *Glucose Preparations*

Dextrosol
Glucose B–D
Glucose with vitamin D, e.g., Glucodin
And similar preparations

(iv) *Liquid Foods and Wines*

Apple juices
Diabetic cordials and squashes
Fruit squashes
Glucosol
Lembar
Lucozade
P.L.J. natural fruit juices
Ribena
Robinson's lemon barley
Rose-hip syrups
All alcoholic beverages, wines, tonic wines and spirits

NOTE: Rectified spirit should be ordered when a spirit beverage, e.g., gin, is required in certain mixtures.

(v) *Malt Extract Preparations*

Bronomalt
Halimalt
Malt extract
Malt extract with cod-liver oil or halibut-liver oil
Malted wheaten food
Radio-malt
Vimaltol
Vitamin malt extracts

(vi) *Meat and Vegetable Extracts and Juices*

Bovril
Brand's essence
Calf's foot jelly
Lemco
Oxo
Valentine's meat juice

(vii) *Mineral and Spa Waters*

Apenta water
Contrexeville
Soda water
Vichy spa waters

(viii) *Miscellaneous Preparations*

Arrowroot
Aurum Ambrosium
Blackcurrant pastilles
Corolac
Dextrin maltose
Diabetic preparations, e.g., Energen, Granose
Glucose barley sugar
Iodised table salt
Kellogg's All-Bran
Lactose
Malted milk tablets
Malto-dextrin
Melozets
Nestrovite tablets
Procasenol
Saccharine tablets
Saxin
Slimming foods, e.g., Natex
Formula 21
Sorbitol
Virolax
Vitaminised chocolate

B. The following preparations are classified as drugs.

(i) *The undermentioned, when used for the treatment of specific diseases*

Allergilac
Casilan
Cow and Gate L.C. food
Cow and Gate L.L. food
Cymogran
Edosol
Galactomin
Lacidac: half-cream and separated
Locasol
Minafen
Trufood Prosol
Sprulac

(ii) *Hydrolysates of Casein and other Proteins*

Casydrol
Pronutrin

(iii) *Vitamin preparations should be regarded as* drugs *when used, for example, in the treatment of vitamin deficiency. They should be regarded as* foods *when used as a routine measure for such healthy persons as school children, factory workers and athletes, and should not for this purpose be ordered on Form E.C.*10.

The lists are not exhaustive. Preparations of a character similar to those mentioned in paragraph A must be regarded as foods.

Toilet Preparations

Decisions concerning toilet preparations, to some extent, must be arbitrary, but as far as possible should be given in accordance with the following principles:

A. It is improper for a doctor to order a preparation of undisclosed composition. Preparations of undisclosed composition should therefore not be ordered on Form E.C.10.

B. Preparations used normally for toilet purposes should not be ordered on Form E.C.10 even though their composition is disclosed and even though they are included in the British Pharmacopœia or British Pharmaceutical Codex.

The following are to be regarded as being covered by the phrase "preparations used normally for toilet purposes":

Astringent lotions
Bath salts
Cleansing creams
Face powders
Hair tonics
Hand creams
Shampoos
Shaving creams
Shaving soaps
Shaving styptics
Skin lotions
Skin tonics
Soaps
Talcum powders
Tooth-pastes
Tooth-powders
Vanishing creams
And similar preparations

C. Certain proprietary preparation for which prophylactic or therapeuti claims are made should not normall be ordered on Form E.C.10 if the could be used for routine toilet pur poses. The cost may be surcharged o a doctor who orders them. The follow ing proprietary preparations are in tha category:

(i) toilet preparations of alleged prophylactic value, such as insect repellent creams, barrier creams and sunscreen creams;

(ii) toilet preparations which were vehicles for some form of medicament, such as medicated soaps;

(iii) toilet preparations for use by persons susceptible to allergic or trophic skin reactions.

The Committee recommended that disinfectants shall be regarded as drugs only when they are ordered in such quantities and with such directions as are appropriate for the treatment of an individual patient, either internally or externally. Disinfectants should not be regarded as drugs if they are ordered for general hygienic purposes.

IN PARLIAMENT

By a Member of the Press Gallery, House of Commons

THE attention of the Home Secretary was drawn on March 31 to the motion declaring that National Health Service drugs should be available to patients of doctors in private practice. Mr. R. A. Butler (Home Secretary) said he could see no opportunity for a discussion of the subject before Easter. About 175 members have declared their support for the motion.

Toxic Sprays

Mr. J. A. Farr asked the Minister of Agriculture on March 31 if the group examining the use of toxic sprays in agriculture had yet met, and when its report could be expected. Mr. J. B. Godber (Joint Parliamentary Secretary) stated that the first meeting of the group was to be on April 13, but he could not say when its report could be expected.

On the same day Mr. G. S. De Freitas asked the Minister of Agriculture if he would establish a service on the lines of that provided for consumers of domestic goods by the Consumers' Association for the compulsory testing of commodities such as sprays and chemical fertilisers. Mr. J. B. Godber said he considered that the present statutory and voluntary arrangements were adequate, adding that they were being kept under review.

Liver Fluke

Mr. J. Morris asked the Joint Parliamentary Secretary to the Minister of Agriculture on March 31 if he was aware that in 1959 farmers in Wales suffered losses running into "thousands of £'s" from liver fluke disease. Mr. J. B. Godber said he recognised that in Wales the disease presented particularly difficult problems, and the Ministry was presenting "a fresh leaflet giving the maximum advice."

Dictol Vaccine

During a number of questions concerning the events which had led up to the exemption of Dictol vaccine from purchase tax, Mr. H. J. Boydon asked if the Chancellor of the Exchequer was aware that, in 1958, 8,000 animals on 260 farms had been treated, and that in 1959 tens of thousands of animals had had the vaccine with satisfactory results.

Colours for Lipstick

Mrs. J. S. Butler asked the Minister of Health what were the regulations that related to the substances used to produce colours in the manufacture of lipstick. Miss E. M. Pitt (Parliamentary Secretary, Ministry of Health) stated in a written reply on March 30 that there were no regulations in the purview of the Ministry of Health that related to that matter. If Mrs. Butler was implying that any of the substances were poisonous, the matter would be one for the Home Secretary.

The Budget

The Chancellor of the Exchequer (Mr. Heathcoat Amory) presented his Budget proposals on April 5. Among them were: Profits tax to go up 2½ per cent. to 12½ per cent; duty rates on imported heavy wines and imported bottled light wines to be reduced by 12s. per gall. (sherry and port should be about 2s. per bottle cheaper); Excise duties on British wines also cut by around 1s. 4d. to 2s. a bottle; voluntary payments at the end of employment and payments described as compensation for loss of office to be subject to income tax but he would exclude "reasonable lump sum payments in the nature of superannuation benefits and payments arising from physical injury"; Section 142 of the Income Tax Act, 1952 to be repealed. (The section enabled a loss in one trade to be set against the profits of another carried on by the same person.) The Chancellor warned that "the time may soon arrive when it would be right that we should take other steps to restrain further expansion of private credit."

Hospital Medical Staffing

Mr. K. Robinson asked the Minister of Health when he expected to receive the report of the Working Party on Hospital Medical Staffing. In a written reply on April 4, Mr. Derek Walker-Smith (Minister of Health) stated the Working Party was still taking evidence and he could not indicate when the report would be ready.

Leukaemia

Mr. G. Thomas asked the Minister of Health to what causes he attributed the 25 per cent. increase in deaths in Wales from leukaemia during the past four years. In a written reply on April 4 the Minister stated the increase could not be associated with any specific factors.

Cruelty to Animals Act

In a written reply on April 4, Mr. R. A. Butler informed Mr. J. Rankin that during 1958, 3,245,990 experiments were carried out by persons licensed under the Cruelty to Animals Act 1876. Of these experiments 366,607 required the use of anæsthetics. The figures for 1959 were not yet available.

The Public Health Laboratory Service Bill was read a second time on March 30.

Import Duty

Replying to a question by Mr. F. T. Willey on April 5, Mr. J. Rodgers (Parliamentary Secretary, Board of Trade) stated that an application for the reduction of import duty on mono-ammonium phosphate was being considered.

Food Research

The appointment of a Food Research Advisory Committee to advise on the food problems requiring investigation or research that should be undertaken with the aid of public funds, was announced in a written reply to Mr. C. Bossom by Mr. Godber on April 5.

COMPANY NEWS

Previous year's figures in parentheses

BEECHAM OVERSEAS, LTD.—Mr. E. E. Clayton has joined the board as administrative director.

UNITED GLASS, LTD.—For health reasons Mr. E. A. S. Alexander has relinquished the post of deputy-chairman, and also his executive duties. He retains his seat on the board.

AYRTON, SAUNDERS & CO., LTD.—Consolidated trading profit for 1959 is £98,828 (£65,284); net profit, £65,855 (£31,205) before tax, £25,156 (£12,097). Ordinary dividend proposed is 7½ per cent.

C. E. FULFORD, LTD.—Mr. Alfred Wiseman, joint managing director of the company and of Vitapro (U.K.), Ltd., has been appointed vice-chairman of those companies, whilst retaining his position as joint managing director.

MOND NICKEL CO., LTD. — Mr. Ivon A. Bailey has been appointed deputy chairman of the company and of Henry Wiggin & Co., Ltd., and Mr. Edward Vaughan has been appointed a director of both companies.

G. PAYNE (CHEMISTS), LTD. (P.C.).—Capital £1,000. To carry on the business of agricultural, dispensing, and retail chemists, etc. Directors: Gilbert Payne, M.P.S., and Joan Payne. R.O.: High Street, Kirton Lindsey, Gainsborough.

MONSANTO CHEMICALS, LTD. —Sir William Garrett has relinquished his executive responsibilities but is continuing as a member of the board. Mr. N. F. Patterson (director in charge of engineering and purchasing) takes over the position of personnel director.

DISTILLERS CO., LTD.—Mr. G. F. Ashford has been appointed deputy chairman of the chemical group. Mr. J. M. Rimington (managing director of the chemical division) has retired and is succeeded by Mr. J. H. Dunn. Mr. J. S. Hunter succeeds Mr. Dunn as assistant managing director (commercial) of the chemical division.

RECKITT & SONS, LTD., and GOYA, LTD.—Reckitt & Sons, Ltd., have bought for cash D. R. Collins, Ltd., which owns Goya, Ltd., and Jane Seymour. Messrs. B. N. Reckitt, J. H. Chapman and R. S. Howard join the Collins board. Mr. Douglas Collins and other executive directors remain in office and it is intended to continue the business under its present management at Amersham.

F. W. BERK & CO., LTD.—Subject to audit group profit for 1959 before charging taxation is £522,520 (£393,683); group profit after all charges, including taxation and including special credits, £263,741 (£189,557); United Kingdom taxation charged, £281,143 (£203,339). Ordinary dividend is raised to 12½ per cent. (from 10 per cent.). A three for ten "rights" issue involving £1·68 millions, at a price to be determined, is also announced.

UNILEVER, LTD., and UNILEVER, N.V.—The full report of the group states that turnover increased from £1,728·24 millions to £1,787·2 millions in 1959, with trading profits of £113·46 millions (against £91·76 millions). Sales of soap and other detergents rose from 1,740,000 to 1,787,000 tons last year. There was also a considerable rise in the profits of the business in toilet preparations in the U.S. Projects involving an expenditure of £52 millions (£44 millions) were approved in 1959. After payment of the final dividends, making 4s. 6·5d. per £1 unit by Unilever, Ltd., Ordinary and Fl.20 per Fl.100 unit by Unilever, N.V. £42·67 millions remains to be added to profits retained in the business.

GLAXO LABORATORIES, LTD.—Group trading results for the half year to December 31, 1959, were as follows: Trading profits, £3,181,000 (£2,418,000 in the equivalent period of 1958); net balance attributable to the company, after tax, £1,668,000 (£1,305,000). Group turnover was 14 per cent. greater than the corresponding period of the financial year ended June 30, 1959. The estimate for taxation for the six months to December 31, 1959, is £1·6 millions against £1·2 millions. The demand for the company's products is being maintained, but, in certain sections of the company's business, keen competition adversely affects prices. Profits are not expected to vary materially during the second half of the year. An interim dividend on the Ordinary stock at the rate of 7 per cent. is declared (5½ per cent.).

ALBRIGHT & WILSON, LTD.—The value of sales and profits are not expected to differ significantly from the comparable figures for 1959, states the chairman (Mr. S. Barratt) in his address accompanying the accounts for 1959. Forecasts for 1960, he adds, will be complicated by the fact that group accounts will incorporate profits of A. Boake Roberts & Co. (Holdings), Ltd. Group capital expenditure of £2·5 millions was £600,000 less than was spent in 1958 and lower than forecast, mainly because of changes in the timing of expenditure on authorised projects. At end-1959 there were projects authorised involving future expenditure in excess of £5 millions and actual contracts for capital expenditure outstanding totalled £913,000 (£376,000). In 1960 it is expected that considerably more than the £2·5 millions reported for last year will be spent. Group net profits increased from £1,786,307 to £2,433,477 in 1959 and the dividend is effectively raised by 4·7 per cent. to the equivalent of 18·3 per cent.

New Companies

P.C.=Private Company; R.O.=Registered Office

BRADLEY PHARMACY, LTD. (P.C.).—Capital £10,000. To carry on the business of chemists, druggists, etc. Subscribers: Francis Hard and Alfred H. Lingard. The directors are not named. R.O. 39 Brocklesby Road, Grimsby.

BLOOMSTEINS PHARMACY, LTD. (P.C.).—Capital £100. To acquire the business carried on by D. Bloomstein at West Ealing, etc. Directors: David Bloomstein, Julia Bloomstein and William W. McDonald, M.P.S. R.O.: 12 Northfield Avenue, West Ealing.

BROWN'S CHEMISTS (PRAED STREET), LTD. (P.C.).—Capital £100. To carry on the business of general chemists, etc. Directors: Paul R. Fletcher, M.P.S., and Lilly Fletcher (directors, Brown's Cash Chemist, Ltd.). R.O.: 43 Upper Berkeley Street, London, W.1.

BUSINESS CHANGES

MR. GEORGE TAIT, F.P.S., Buckie, has acquired the pharmacy of Mr. J. W. Fraser, M.P.S., 3 Abbot Street, Craigie, Perth.

SAVORY & MOORE, LTD., have acquired the businesses of W. J. Thomson (H. L. Wade, M.P.S.), 9 Montpellier Terrace, Cheltenham, and of S. Hudson (Mr. D. I. Jones, M.P.S.), 46 The Green, Warlingham, Surrey.

MR. D. M. WOOD, M.P.S., who has been associated with Mr. A. A. Meldrum in the pharmacy at 1 Mount Street, Aberdeen, is carrying on the business on his own account following the retirement of Mr. Meldrum (see p. 395).

Appointments

K. W. CHEMICALS, LTD., 55 High Holborn, London, W.C.1, announce that Mr. E. A. Wright, F.P.S., has joined their staff.

DISTILLERS CO. (BIOCHEMICALS), LTD., London, S.W.19, have appointed Mr. R. H. Freeth-Selway their medical representative in Bristol and Gloucestershire.

J. GROSSMITH & SON, LTD., 41 Piccadilly, London, W.1, have appointed Mr. W. J. Lewis, 61 Pentremalwed Road, Morriston, Swansea, their representative for Grossmith and Hartnell perfumery in South Wales, Monmouthshire and Gloucestershire.

DEATHS

AHEARN. — Recently, Mr. S. P. Ahearn, managing director of the British Drug Houses overseas associate company in Australia. Mr. Ahearn joined the British Drug Houses, Ltd., during 1928 and became one of the small group of medical representatives then calling on doctors over a wide territory. In 1941 he took charge of the company's Liverpool distributing depôt where he remained until 1943 when he accepted the management of the company's subsidiary of which he became the managing director in 1945.

ALLSTON.—On April 3, Mr. R. O. (Reg) Allston (joint general manager, the Ever Ready Co. (Great Britain), Ltd.), aged sixty-three.

BLAGDEN. — On March 31, Mr. Victor Blagden, aged ninety-two. Mr. Blagden was the first chairman of the British Chemical and Dyestuffs Traders' Association, and for twenty-seven years president of the association, an office he relinquished in 1949. In the same year Mr. Blagden retired from the board of Victor Blagden & Co., Ltd., of which he was chairman and founder. During 1944 members of the association presented Mr. Blagden with his portrait, by Maurice Codner, to mark his completion of twenty-one years as president, and as an expression of the esteem and affection in which he was held. A memorial service is to be held at St. Peter's Church, Vere Street, London, W.1, at 2 p.m. on April 11.

DAVIES.—Recently, Mr. Gareth Lewis Davies, M.P.S., 38 Muswell Hill, London, N.10. Mr. Davies was apprenticed to the late Mr. S. D. Doughton, Aberystwyth. He qualified during 1944.

DAVIES.—On March 22, Mr. William John Davies, M.P.S., 22 Goring Road, Llanelly, Carmarthens. Mr. Davies, who qualified during 1909, was a past chairman of the Swansea and West Glamorgan Branch of the Pharmaceutical Society.

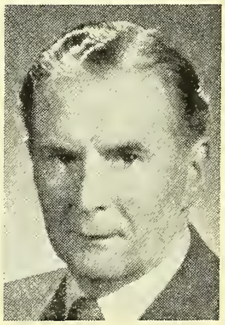
JOUGHIN.—On March 20, Mr. Herbert Joughin, M.P.S., 25 Beech Avenue, Gatley, Cheshire. Mr. Joughin qualified during 1907.

SNOAD.—On March 10, Mr. Dudley Snoad, Keynsham, Somerset, aged eighty-nine. Mr. Snoad represented G. B. Kent & Sons, Ltd., 24 Old Bond Street, London, W.1, in the West Country and South Wales for fifty-four years, retiring during January 1949.

TOMLINSON. — Recently, Mr. Derek Albert Tomlinson, M.P.S., 20 Lowthorpe Crescent, Deepdale, Preston, Lancs. Mr. Tomlinson qualified during 1949.

TURNER.—On March 4, Mr. Jesse Turner, M.P.S., 37 Woodland Road, Blackheath, Birmingham. Mr. Turner qualified during 1924.

PERSONALITIES



ALDERMAN W. J. TRISTRAM, J.P., M.P.S. (a former chairman of the National Pharmaceutical Union and former president of the Pharmaceutical Society) has been elected vice-chairman of the Executive Council of the City of Liverpool. He is the first pharmacist in the City to hold the office.

MR. A. M. CAMPBELL, M.P.S., of Lerwick, Shetland Islands, recently acted as interpreter for naval officers visiting a 300-strong Russian fishing fleet. Mr. Campbell's fluent Russian was of value in clearing up a misunderstanding that had occurred. Upon his return he commented upon the hospitality he had received.

MR. A. A. MELDRUM, M.P.S., Aberdeen (a former president of the Pharmaceutical Society) retired from business on March 31. Mr. Meldrum qualified in 1920 and, after working in the south of England for two years, purchased a pharmacy in Tarland, Aberdeenshire. In 1928 he moved to Aberdeen and took over the business at 1 Mount Street from which he has now retired. He took an active interest in local pharmaceutical affairs and has been chairman of the Aberdeen and North-eastern Scottish Branch of the Society, president of the Aberdeen Pharmaceutical Association, and a member of the Local Pharmaceutical Committee. In 1943 Mr. Meldrum became a member of Council of the Pharmaceutical Society and was president in 1950–51. Mr. Meldrum served in the Royal Army Medical Corps during the 1914–18 war and was a member of the local man-power committee during the 1939–45 war.

SIR HUGH LINSTEAD, M.P., who recently came to an end of his term of office as chairman of the Franco-British parliamentary relations committee, has been promoted to be a Commander of the Legion of Honour on the occasion of the visit to London of the President of the French Republic.

SIR WILLIAM GARRETT, who is relinquishing his executive responsibilities with Monsanto Chemicals, Ltd., in order to devote more time to his other interests (see p. 393), is chairman of the Association of British Chemical Manufacturers and a director of Metal Industries, Ltd. He is a member of the Civil Service Arbitration Tribunal and was president of the British Employers' Confederation from March 1958 until March 1960.

MR. W. HOLMES, M.P.S., Kenpas Highway, Coventry, Warwicks, now aged seventy-five, continues in business at the pharmacy in Foleshill Road, which he opened forty-seven years ago. Mr. Holmes became a Freeman of Coventry in 1906 after completing a seven-year apprenticeship at the Coventry Provident Dispensary. He later worked in Cannock and London before returning to Coventry in 1913. He is a life member of the Society, and was a member of the local pharmaceutical services committee.

OVERSEAS VISITS

MR. W. A. S. STEVENS (managing director, Radiol Chemicals, Ltd.), left London recently for an extensive business tour of Canada and the United States to discuss business expansion.

BRANCH EVENTS

LIVERPOOL

Women Pharmacists Dine

Sixty members and friends recently attended the annual dinner of the Merseyside Branch, Association of Women Pharmacists, in Liverpool. Mr. Denver L. Rees treasurer, Liverpool Chemists' Association and Branch of the Pharmaceutical Society), proposed the toast to the National Association. As the president was unable to attend through illness, her speech in reply was read by her husband, Mr. Noel Jones. In this she commented on the work and responsibilities of women pharmacists and the increasing part they were taking in branch activities throughout the country. Miss E. F. Llewellin, who presided, introduced the guest speaker, Miss Doris Eaton, M.B.E., secretary to Lady Leverhulme, who gave some interesting sidelights on her work. Miss H. G. Irvine proposed the toast to the guests, the response being by Miss A. F. Jones, chairman, Liverpool branch of the Guild of Public Pharmacists.

YEOVIL

A Get-together

Realising how difficult it was to get pharmacists to get together and to stimulate more interest in branch affairs, Mr. D. T. Evans (secretary, Yeovil Pharmaceutical Association), organised an informal dinner at Yeovil on March 3. Twenty-four pharmacists and their wives and friends attended, a 90 per cent. attendance from Yeovil town and as Yeovil has only nine pharmacies including five branches of multiple organisations, it was a demonstration of good fellowship that could well be copied by almost every town in the country. The loyal toast was proposed by Mr. D. T. Evans, after which Mr. E. H. Banks, Illminster, proposed that of the Pharmaceutical Society, adding that he would " make no comment on a certain green paper " that had recently arrived by post chaise from London. Mr. W. C. Webb, Stoke-sub-Hamden (chairman, Somerset Branch of the National Pharmaceutical Union) humorously added, on behalf of many present, that he thought that the Society should be well toasted. After dinner the company was entertained by Mr. J. T. Bonthron, M.P.S. (Evans Gadd & Co., Ltd., Exeter) with a well-presented demonstration of " Magic Moments." That was followed by informal short speeches. Mention was made of the uneasiness felt by the townsmen of Yeovil at the proposal of the Dorset County Council to acquire a part of Somerset in which Yeovil was situated. Members of the Yeovil Association had no wish to be merged into Dorset, where, with the exception of Bournemouth, about forty miles away, pharmaceutical organisation was almost non-existent. Mr. Webb proposed that the following resolution should be sent to all bodies connected with pharmacy, including the Somerset Executive Council.

> " That this Association views with alarm the proposal that parts of Somerset should be merged into the County of Dorset. Not only would the present pharmaceutical branches be disrupted, but such action would also throw into chaos, and be detrimental to, the Health Services that have been so painstakingly built up over the twelve years since the passing of the N.H.S. Act."

The motion was seconded by Mr. Warren, Martock, and passed unanimously. At the next " county " meeting " Yeovilites " are expected to be in evidence now that "everybody knows everybody."

CHESTER

When Not To Sell

" We should be very proud to have been the first national body to have the wisdom and foresight to draw attention to the moral dangers of central nervous system depressive drugs " said Mr. H. Steinman (member of the Council of the Pharmaceutical Society) speaking at the annual dinner of the Chester and District Branch recently. " It is more important for the chemist to know when not to sell drugs than when to sell them " he said responding to a toast to the Pharmaceutical Society. Chemists should accept responsibility in deciding when to advise customers to take medical advice before buying drugs, he stressed. He said that there had been many demands for a publicity committee for the Society, but he felt that each pharmacist had a responsibility to be his own best publicity. " People are always criticising the drug bill but they must realise that drugs are helping to keep the nation in work and saving hospital bills " he went on. The toast to the Society was proposed by Mr. H. Humphreys Jones. He recalled his early days in pharmacy when he said he earned £2 10s. 0d. a week. " But I doubt whether the pharmacists of today with all their £1,000's are any happier than we were " he added. In the absence of Mr. J. G. Roberts the next toast " The City of Chester " was admirably proposed by Alderman Leonard Edwards, who said he was sure that the beautiful city of Chester would provide ample facilities for educating the pharmacists of the future. Responding, the mayor, Alderman H. W. Talbot, said " I have noticed that no criticism has been directed at the council at this function and it has enabled me to have a much more enjoyable time than I have had at these functions for a very long time." Proposing the toast to " The Guests " Mrs. P. L. Roberts (chairman), thanked all the speakers. Mr. W. Tregenza (president of the Birkenhead and Wirral Pharmacists Association), who responded, said he felt social occasions among pharmacists were very important. Mrs. E. Wynne Jones presented a book token to the chairman on behalf of the National Association of Women Pharmacists. " Ever since the time of Mrs. Pankhurst women have been making themselves felt in all branches of life " she said. " Although some people still think of the chemist as the man in the white coat we thought we would like to mark the occasion when we have a woman chairman by a small presentation to Mrs. Roberts."

TRADE NOTES

Prices Reduced. — Riker Laboratories, Ltd., Morley Street, Loughborough, Leics, announce reductions, from April 11, in the prices of Theodrox and Theodrox with phenobarbitone.

Distributors in Ireland. — Veritas Drug Co., Ltd., 223 Kensington High Street, London, W.8, have appointed as their distributors in the Republic of Ireland, P. C. Cahill & Co., Ltd., 16 Bachelor's Walk, Dublin, C.1, as from May 1.

Toilet Waters Not Perfumes. — The products of Molyneux et Cie (Designs and Perfumes), Ltd., 63 Grosvenor Street, London, W.1, illustrated in the *C. & D.*, April 2, p. 366, were new *eaux de toilette* and not perfumes as stated in the caption.

Seamless Capsules.—A research team to undertake the development of new products in seamless capsules, with strict laboratory control throughout manufacture, are offered by B. & P. Laboratories, Ltd., 9 Packington Road, London, W.3.

Rhodesian Opportunity. — Elsewhere in this issue the Lusaka Publicity Association, Lusaka, Northern Rhodesia, offer to match investment with loans for the establishment at Lusaka of a factory for the production of low-priced drugs and cosmetics for the African market.

Suture Prices Reduced. — Chas. F. Thackray, Ltd., Leeds and London, sole distributors in the United Kingdom of the D. & G. sutures made by Cyanamid of Great Britain, Ltd., advise a reduction in price of non-needle sutures to 28s. net per doz. envelopes. Prices of atraumatic needle sutures and Anacap braided silk are unchanged.

Distribution in Syria. — The Droguerie Abdelnour, Beyrouth, Lebanon, has been engaged for twenty years in importing, distributing and publicising pharmaceutical products, powdered milk products, cosmetics, etc., and invites inquiries from British manufacturers wishing to increase trade in the Lebanon and Saudi Arabia.

Home Safety Poster.—In the interests of home safety the British Safety Council is circulating, for display in factories and workshops, a poster (20 x 30 in.) in three colours featuring two popular appliances, one of which is the Pifco electric blankets, which comply with BS2612 and are approved by the British Safety Council.

Prices for Customers and Suppliers. —Lincoln Chemicals, Ltd., 55 Strafford Road, London, W.3, are offering cash prizes to customers for Linc-o-Lin beer shampoo and to retailers supplying it to the winners. Entry forms are with packs of Linc-o-Lin beer shampoo sent out up to and including August. Window stickers are available.

Package Changes. — The packs for two Damaskin products have been changed. Damaskin Quick Tan (a sun lotion) is now in a squeeze bottle; Cosmeticolor leg make-up is in a redesigned tube and carton. Both products are distributed by Thos. Christy & Co., Ltd., North Lane, Aldershot, Hants. Display material is available.

A Razor Offer.—A Press and television advertising campaign costing £50,000 is supporting the "Spring offer" by Ever-Ready Razor Products, Ltd., 26 Bedford Row, London, W.C.1, of one Pal Injecto-matic razor supplied free to each customer purchasing a magazine of twelve Pal injector blades at the regular price. The advertising support for the offer commences on April 11.

A Star out of Orbit. — Rank Precision Industries, Ltd., cine and photographic division, Mitcheldean, Glos, ask chemists to note that their Moviemaster 635 projector is available to all dealers through appointed wholesalers and as such should have been starred in the company's announcement in the *C. & D.*, March 26. The model 613 projector, which wrongly bore the star, is available only to Bell & Howell accredited stockists.

First Three of a Range. — The intention to produce an extended range of skin-treatment preparations was announced by Phyllis Scott-Lesley, 11 Old Bond Street, London, W.1, on March 30. Miss Lesley markets at present three preparations: BZ.10, a cream based on a placental extract, Placelium; an almond-milk cleanser containing a moisture-retaining and an anti-bacterial ingredients; and Topaz herbal lotion, a "pick-me-up" for the face.

A Descriptive Word Only. — Spa Brushes, Ltd., Freeman Works, Chesham, Bucks, point out that the use of the word "luxury" in connection with their bristle hairbrush No. 2106, as illustrated in the *C. & D.*, April 2, p. 365, may be misleading. The word was intended to convey no more than the aristocratic nature of the product. The word Luxury applied to a brush is a registered trade mark of Hughes Brushes, Ltd., 32 Ajax Avenue, Slough, Bucks.

Price Reductions. — Exactly twelve months after the last major alteration of prices of corticosteroid preparations, the principal manufacturers of such products announce further substantial price reductions from April 4.—From the same date the Distivit range of vitamin B_{12} injections are being reduced in price by the Distillers Co. (Biochemicals), Ltd., The Broadway, Wimbledon, London, S.W.19. Retailers should claim direct to Messrs. Distillers for stocks of Distivit injections held at close of business on April 9, quoting batch numbers.

Advertisements Corrected.—The Distillers Co. (Biochemicals), Ltd., The Broadway, Wimbledon, London, S.W.19, state that incorrect prices were shown in their advertisement for Direma in the *C. & D.*, April 2. The correct prices are as given in The Chemist and Druggist Quarterly Price List, and in the company's advertisement on another page of this issue.—Imperial Chemical Industries, Ltd., pharmaceuticals division, Fulshaw Hall, Wilmslow, Ches, point out that an incorrect price was given for their Savlon 2-purpose barrier cream in their advertisement on the cover of the *C. & D.*, March 26. The correct retail price is 2s. 11d. per tube; trade price is 20s. per doz. plus 25 per cent. purchase tax, as shown in the *C. & D.* Quarterly Price List.

Easter Holidays

Easter holiday for most companies in the trade is from normal closing time of business on Thursday April 14 until Tuesday morning, April 19. The following exceptional arrangements have been notified:—

The British Drug Houses, Ltd. Emergency staffs available at Graham Street, London, N.1, and Nottingham depôt on Saturday morning to deal with urgent orders.

Richard Daniel & Son, Ltd., Derby and Ashton-under-Lyne. Normal service on Saturday.

Evans Medical (Northern Ireland), Ltd., Ravenhill Avenue, Belfast, closed from 12.30 p.m. on Saturday until Wednesday morning.

Glaxo Laboratories, Ltd., Greenford, Middlesex. Skeleton staff available Saturday morning to deal with emergency orders.

Imperial Chemical Industries, Ltd., pharmaceuticals division. Midland regional sales office and warehouse, and Scotland and Northern Ireland sales offices open on Good Friday. Grangemouth warehouse open Good Friday and Easter Monday but closed on May 2.

P.D.S. (Leeds), Ltd., 1 Howarth Place, Leeds, 7. Closed until Wednesday morning; skeleton staff available for "calling orders" and urgent requirements on Saturday.

The following have notified that urgent supplies may be obtained from John Bell & Croyden, 50 Wigmore Street, London, W.1:—

Distillers Co. (Biochemicals), Ltd., Speke, Liverpool, 24, and Wimbledon, London, S.W.19.

FBA Pharmaceuticals, Ltd., 37 Bedford Row, London, W.C.1.

Horlicks, Ltd., Slough, Bucks.

May & Baker, Ltd., Dagenham, and Pharmaceutical Specialities (May & Baker), Ltd., Dagenham (order office closes 3.30 p.m., Thursday).

Merck Sharp & Dohme, Ltd., Hoddesdon, Herts.

Paines & Byrne, Ltd., Perivale, Greenford, Middlesex.

Parke, Davis & Co., Ltd., Hounslow, Middlesex (Carfin, Lanarks, branch closed on Easter Monday).

Sandoz Products, Ltd., 23 Great Castle Street, London, W.1 (closed from 4 p.m. on Thursday).

Bonus Offers

Walter Crowe, Ltd., 26 City Road, London, E.C.1. Finesse deodorant spray. Twelve invoiced as eleven. Introductory offer. On direct orders.

Allen & Hanburys, Ltd. Acriflex. Twelve invoiced as eleven on order for 6 doz. or more tubes, either size, assorted as desired. Twelve invoiced as ten on order for 12 doz. or more tubes, either size, assorted as desired. Complete dozens only. Till August 27.

NEW PRODUCTS AND PACKS

An Application for Acne.—Organon Laboratories, Ltd., Brettenham House, Lancaster Place, London, W.C.2, announce the introduction of a topical application, Actriol, for the treatment of acne. Actriol contains 2·5 mgm. of 16-epi-oestriol in each gm. of cream. It is presented in tube of 15 gm.

Thiopentone Suppositories. — Pharmaceutical Specialities (May & Baker), Ltd., Dagenham, announce the introduction of suppositories containing Intraval sodium brand thiopentone sodium. The suppositories are indicated for pre-anæsthetic medication in children, and are supplied in containers of five 125-mgm., five 250-mgm. and five 500-mgm. sizes. Exempt from purchase tax they are subject to P.I, S.1 and S.4 of the Poisons Rules.

Iron-complex Tablets.—Sugar-coated tablets each containing 225 mgm. of ferro-glycine sulphate complex (equivalent to 40 mgm. of ferrous iron) have been introduced under the name Pleniron by Thomas Kerfoot & Co., Ltd., Vale of Bardsley, Ashton-under-Lyne, Lancs. It is claimed the combination protects the iron from oxidation and keeps it stable until absorbed. The containers are a tube of 100 and a bottle of 1,000 (both dispensing packs).

On General Release. — Smith & Nephew Pharmaceuticals, Ltd., Welwyn Garden City, announce that Narphen brand phenazocine has been generally released, the initial hospital demand having been satisfied. Narphen, an analgesic claimed more powerful than morphine or pethidine, is effective at doses as low as 0·5–2 mgm. It is a compound of the benzomorphan group and is subject to the Dangerous Drug Regulations. Narphen is available as 1·1-mil ampoules each containing 2 mgm. per mil.

Diuretic Therapy Supplement. — E. R. Squibb & Sons, Ltd., Edwards Lane, Speke, Liverpool, 24, announce the introduction of Di-Ademil-K tablets, each containing 25 mgm. of hydroflumethiazide and 625 mgm. of potassium chloride. The tablets are indicated in all oedematous conditions where it is considered necessary to supplement diuretic therapy with additional potassium, including patients on long-term diuretic therapy, patients receiving a digitalis preparation, and patients suffering from hepatic cirrhosis. The capsule-shaped, coated tablets are available in bottles of 100 and 500.

Coagulability Reagent. — Evans Medical, Ltd., Speke, Liverpool, 24, have been appointed distributors for the Thrombotest (Owren) reagent of Nyegaard & Co. A/S, Oslo, Norway, and hold stocks of the product. Thrombotest is a new reagent for determining the coagulability of the blood in the control of anticoagulant therapy. It is presented in a lyophilised form and makes possible a combined estimation of all four coagulation factors known to be reduced by treatment with oral anticoagulants. The product is available in packs of two sizes, each containing five ampoules. The small pack contains sufficient for 20–40 tests and the large pack sufficient for 100–200. The product is not subject to tax.

A New Pressor Agent.—CIBA Laboratories, Ltd., Horsham, Sussex, announce the introduction of a new pressor agent, hypertensin-CIBA, for the treatment of shock and collapse. Several hypertensins (naturally-occurring polypeptides of 8- or 10-amino acids) were synthesised in 1956 by the company's research workers. Hypertensin-CIBA is a val$_5$-hypertensin 11-asp-β-amide. It is understood to be about ten times as potent as noradrenaline and thus the most potent biologically active pressor agent known. Hypertensin has the advantages of reducing risk of skin and superficial tissue necrosis (because it has less vasoconstricting effect on cutaneous vessels); that cardiac irregularities are less likely; and that tachyphylaxis does not develop. It is available as ampoules (0·5 mgm./2 mils) in box of six.

Daytime Sedative.—Pharmaceutical Specialities (May & Baker), Ltd., Dagenham, announce the introduction of Censedal brand allyl neopentyl barbituric acid, which clinical studies are understood to have confirmed to be a useful daytime sedative. In therapeutic doses it seldom produces drowsiness; it is rapidly absorbed after oral administration; and it has a duration of action between that of amylobarbitone and that of phenobarbitone. Censedal is indicated for sedation in anxiety, tension and phobic states and in senile agitation but is not effective against agitation or anxiety in psychotic patients and is not an effective anticonvulsant in epilepsy. The product is presented as white scored tablets each containing 60 mgm. (approx. gr. 1) and 200 mgm. (approx. gr. 3) of the active compound. Censedal is exempt from purchase tax and is subject to P.I, S.1, S.4, of the Poisons Rules.

Cologne-impregnated Towelette. — Arrangements have been made for the sale in the United Kingdom of the Boldoot eau-de-Cologne - impregnated towelette, "an up-to-date, hygienic, ever-ready cleanser and refresher for personal use." Distributed to passengers by a number of international airline operators, the towelette is of particular appeal to travellers, both men and women. Each towelette is in a hermetically sealed metallised and plastic-lined envelope. A pack of five is easily carried in handbag or pocket. Introduced by J. V. Boldoot, N.V., Amsterdam, Holland, the towelettes are being produced in the United Kingdom by Hunter Hardy, Ltd., Hyde, Ches.

Perfumed Deodorant Spray.—Walter Crowe, Ltd., 26 City Road, London, E.C.1, have been appointed sole distributors of a new perfumed spray deodorant, Finesse. The deodorant is presented in a light green polythene squeeze bottle.

Between Perfume and Cologne.—Described as "the perfect compromise between a perfume and a Cologne," "Femme" *parfum de toilette* is suitable for all times of the day and evening but particularly appropriate for day-time use when a more subtle fragrancy may be desired.

Roll-on Deodorant for Men.—First of a series of men's toilet preparations to be marketed by André Philippe, Ltd., 16 Cosway Street, London, N.W.1, is the company's No. 104 men's roll-on deodorant, issued in 1 doz. to an outer.

"Visible Man" Assembly Kit. — J. & L. Randall, Ltd., Merit House, Cranborne Road, Potters Bar, Middlesex, have been appointed sole distributors for the "Visible Man," an American product that serves as an introduction to anatomy.

Moth-proofer Aerosol. — The Racasan aerosol range has been increased by the addition of Racasan Moth-proofer aerosol. Any of the company's aerosol products may be assorted with Paradichlorbenzene products and containers for discount purposes. (Bonus scheme ends April 11.)

"Firming Facial."—A firming facial described as new and different, "Build-up," has been introduced by Revlon International Corporation, Ltd., Brook Street, London, W.1. The product is claimed to help stimulate circulation and tighten enlarged pores; firms sagging contours, and refine skin texture.

Spray Bandage. — Nurse Sykes Co. (a division of J. Waterhouse & Co., Ltd.), Ashton-under-Lyne, Lancs, are marketing a new product, the Nurse Sykes Mathaplast antiseptic spray bandage, which is being nationally advertised. The pack is a pressurised container from which the spray is applied to the wound or skin, killing germs and providing protection. The minimum order is 1 doz.

FIGURES IN THE PHARMACEUTICAL WORLD

AMONG lecturers to branches of the Pharmaceutical Society in recent years, Mr. B. J. Thomas, M.P.S., D.B.A., has gained a special recognition and popularity. Whatever the changes that have taken place in the practice of pharmacy, and they have of course been revolutionary in their effects, there remains for most ordinary members of the Society a strong appeal in the practical side of their craft. Mr. Thomas has shown that the art of dispensing need not end at the level of skill and knowledge acquired during the old-style training, but offers opportunities of being developed in new ways to meet modern scientific advances. With the advent of the antibiotics in particular, new techniques and routines of sterile dispensing had to be elaborated, and Mr. Thomas made himself a master of them. The experience he acquired was soon in demand. He was called in to expound and demonstrate the new methods whether at single lectures or in multi-lecture courses. As a lecturer he proved as popular and well liked as his lectures were invaluable to his hearers—whether practising pharmacists or students. He can claim to have lectured to most branches in England and Wales, as well as in Scotland (Edinburgh) and Northern Ireland. Perhaps a lecture he gave on "Aseptic Dispensing and Sterilisation" at the headquarters of the Pharmaceutical Society of Northern Ireland in 1951 was the most outstandingly successful, attracting as it did an audience of over 200 who received it with enthusiasm. He has also conducted post-graduate courses at Harrow and West Ham.

As a pharmacist Mr. Thomas got away to a good start. He was apprenticed, 1930–34, in his home town of Neath, Glamorgan, to Mr. H. G. V. Venables; spent a couple of years at Eastbourne as assistant to Mr. C. H. Temple, Ph.C., whose business was of the "heavy dispensing" type, including a fair proportion of homœopathic dispensing; and returned to Wales to qualify (1937). At Cardiff he gained medals in pharmaceutics and pharmacognosy, and after a short period as qualified assistant with Lewis & Burrows, Ltd., one of whose founders (Burrows Trick) was a fellow citizen of Neath, he joined Allen & Hanburys, Ltd., at their Vere Street pharmacy. In 1945 he was promoted manager of the pharmacy, a post he continued to hold until transferred within recent months to the company's medical department. At Vere Street he not only applied his pharmaceutical knowledge to the special problems of aseptic dispensing and sterilisation. He has also been host to innumerable students and V.I.P.'s of pharmacy, British and foreign, and apprentice-master to many entrants to the profession. The pharmacy schools at Manchester, Dundee, Leicester, Brighton, Chelsea, Belfast and "The Square" have sent to him parties of students to see what practical pharmacy was like in a West End dispensing business of outstanding character and reputation. Some repeated the process year after year.

MR. B. J. THOMAS

The practical abilities of Mr. Thomas were put to good use by the Pharmaceutical Society when he was asked to organise the Society's exhibit at the British Medical Association meeting at Cambridge in 1948 and those which followed at Harrogate and Liverpool in 1949 and 1950. They have been regularly drawn upon for a long time in his capacity as invigilator of the Society's examinations in London.

Mr. Thomas has done good work on committees and subcommittees of the British Pharmacopœia and British Pharmaceutical Codex including the Sterile Materials, Tablets and Capsules and Nomenclature Committees of the British Pharmacopœia and the pharmacy subcommittee of the British Pharmaceutical Codex. He is a member (till 1961) of the Standing Pharmaceutical Advisory Committee.

In all those ways his grasp of pharmaceutics is obviously being put to good account. His flair for the practical shows itself also in his having, in quite recent years, acquired an additional qualification—that of Licentiate of the Institute of British Surgical Technicians, an accomplishment with a special application to the transfer to Vere Street in 1959 of his company's surgical instrument showroom, formerly at Wigmore Street.

Mr. Thomas's experience extends into branch activities and into administration. For many years he has been a member of the committee of the Western Pharmacists' Association [of London] and for two successive years (1952–54) was chairman of the West Metropolitan Branch of the Pharmaceutical Society. He is the present secretary of the executive committee of the British Insulin Manufacturers. Mrs. Thomas (née Joyce Allen) is also a pharmacist, at present in a part-time post.

Today Mr. Thomas is concerned principally with organising clinical trials for new pharmaceutical products of medical research by his company. Should some turn of the wheel, however, renew a need for his special pharmaceutical skills, they will be found as purposeful as ever and now backed, as has been shown, by a new habit of thought over a much wider field.

Now and followed-up or later and once-only?

N.W. CHEMISTS URGE ACTION TO AVOID PRICE CHAOS

RESALE price maintenance, marketing policy, publicity for pharmacy, containers for tablets and drops and original packs in relation to prescribed quantities were the principal topics of discussion at an area conference of the National Pharmaceutical Union at Blackpool on April 1. It was attended by chemists from the counties of Cheshire, Cumberland, Lancashire and Westmorland. Whether the rest of the world thinks tomorrow what the Northwest area in general or Lancashire thinks today or, as some would claim, what Birkenhead thinks at 12.30 a.m. on the day of issue, may be in doubt. For what truth there is in the shibboleth, however, ideas were put forward at Blackpool that were at variance with current policies of the Executive Committee.

The participants were welcomed by the chairman of the Blackpool Branch of the N.P.U. (Mr. Philip Varley) who was able, as a former member of the Executive, to speak with knowledge of the hard work put in by the Union's headquarters on behalf of members. Mr. Varley hoped that no member would leave without having had his say, for only in the knowledge of what members were thinking could policy be framed.

Pharmacy's "Winds of Change"

The N.P.U.'s chairman (Mr. G. T. M. David) presided at the meeting. In his opening remarks he said the Prime Minister's "wind of change" was blowing over pharmacy as well, and even increasing in intensity. It was a sign of the times that, out of seventy preparations in the new British National Formulary, sixty were proprietaries. That meant a significant change in prescribing habits and a corresponding problem for those concerned with negotiating the remuneration of contractors. The Executive was concerned to help members, in the trading side of their work, to meet competition. Though C.F. had been killed many manufacturers, he pointed out, continued to channel their supplies through pharmacists, and if some were beginning to wonder whether they were wise in doing so, it was in the hands of chemists to persuade them to continue. The Executive had rejected as too costly a full-scale productivity methods investigation into retail pharmacy, but urged members to apply common-sense principles of siting stocks to save steps. While an efficient wholesaler service was a necessity to chemists, there were still some things that lent themselves to purchase by co-operative buying groups. The Executive was concerned at the threat to price maintenance, had sent a deputation to put the retailer's point of view to the Parliamentary Secretary of the Board of Trade, and was in consultation with the Proprietary Articles Trade Association as to the best means of putting the price-maintenance case. Ignorance of trading conditions among members of Parliament was a troublesome factor in the situation, and the Executive Committee was preparing information which Branch secretaries could put to their M.P.s. Till that was ready he urged them to stay their hands, so that all could take part in "one supreme effort."

Mr. David spoke of the declining number of pharmacies in the country. Most of the 114 fewer in 1959 were, he said, private pharmacies, and a number of the remainder were small and unsaleable. The decrease might not be a bad thing if it led to larger units with two or more pharmacists per shop, and young applicants for help from the Business Purchase and Guarantee Fund were being told of the advantages of combining with others in setting up in business. He concluded by mentioning that 1960, the jubilee year of the Chemists Defence Association, was also a bonus year of the Chemists' Mutual Insurance Society, with a 10 per cent. reduction in premiums.

Action Call Against Price Breakdown

A resolution "viewing with great concern" the possible breakdown of resale price maintenance and calling upon the Executive to take the strongest possible action to prevent it was moved on behalf of Morecambe Bay and District Branch by Mr. H. Clegg. Mr. Clegg said the phrase "public interest" was glibly used, but chemists, who spent their lives in the public interest, should not be made the whipping boy in efforts to reduce the cost of living. A shopkeeper's profits were his wages. Unrestricted price cutting would eliminate many of the smaller traders, bring in more self-service stores, reduce services to customers and perhaps even quality. Mr. G. L. Beet, Morecambe, who seconded, said that seaside chemists were particularly vulnerable, and Mr. J. C. Leigh, Liverpool, in supporting, said that much publicity was being given to the forces brought to bear to end price maintenance and that counter measures were an urgent need. If the resolution were passed, every member must support it up to the hilt. Mr. A. H. Dyson, Birkenhead, said that all were agreed about the objective, but what should their action be? He had been given conflicting advice from members of the Executive on whether to write to his M.P. He himself favoured prompt action, otherwise their efforts might be "too little and too late," as in the C.F. case.

A plea to the Executive to be "careful and circumspect" in the case they put forward was made by Mr. M. Casson, Manchester. The basis should be not chemists' bad times in the days before the P.A.T.A. but the benefits to the public of stable prices. Mr. David interposed to say that it was for just such a reason that the Executive was asking members to wait before acting. They must not be too late, but neither should they be too early.

Mr. G. Espley, Blackburn, disagreed. He advocated action quickly by many, reinforced later by what the Executive recommended. Only two groups could benefit by the abolition of price maintenance—the super-markets and the multiples. Three could be the losers—the small shopkeepers; shop assistants (for it would be impossible to maintain those in the higher wage categories); and the public, who would either become tied to town-centre stores or have to pay higher prices on the outskirts.

Miss A. M. G. Phillip, Barrow, shared Mr. Espley's viewpoint, reminding her hearers of the success they had achieved when, after a previous area meeting, 200 had written to a manufacturer objecting to his trading policy. Action now, followed up later, would have the greatest weight.

Mr. W. Stanier, Congleton, said he had already had replies to a letter he had sent to M.P.s, including one that spoke of the member's surprise at the low level of gross profit in pharmacies. If every member could show such a letter, an effective blow would have been struck.

Mr. E. A. Eccles, Blackburn, said that an even more powerful organisation should be won to the chemist's viewpoint: Fleet Street. The Executive should prepare information that could be issued to members to put to local journalists. If necessary a public relations officer should be appointed.

Mr. C. A. Richardson, Morecambe, urged that chemists should support their beliefs with appropriate action by refusing to sell any preparation to which was tied the string of "something for nothing"—even if it meant letting all tooth-paste sales go to the grocer.

The resolution was carried with overwhelming support.

Marketing Policy

Giving an account of the activities of the Marketing Policy Committee, Mr. H. Steinman (a member of Executive) said the work, though long-term, was definitely taking shape. The Committee's terms of reference were liaison with manufacturers; to watch profit margins; to enable members to meet competition on price; and to engage in propaganda. Details of the Committee's negotiations were necessarily confidential, but they had had to do with coupon schemes, temporary price reductions, stamp trading, clinic trading, the sending to retailers of unordered goods, refunds when retail or wholesale prices were reduced, incentive schemes aimed at assistants, the supply of goods to industrial concerns, misleading statements of prices or trading terms, non-issue of receipts, the value of display space, agency agreement terms, confusion between the packs of colour and black-and-white films, new photographic agencies where facilities already existed, the supply of films and flash bulbs to stores, and direct offers to consumers through women's magazines. Facilities provided by the N.P.U. for meeting competition (the special packs of cotton wool and glucose powder, the 5s. hot water bottle and the counter bags and price tickets) were showing results, but the Union could not dictate their use. Chemists themselves must decide where to use them, but there should be some revival of the art of selling. The Executive believed that a sale lost by a private chemist to a multiple affected private pharmacy in general. Available to members were lists of prices charged by the multiples for certain items and advice on where to buy to meet that competition. The N.P.U. symbol was becoming a trading asset, but he urged that it should be displayed alone and not among stickers, price offers, etc. Union-sponsored goods had their critics, and it had been decided to sponsor only such goods as could not be bought by individual chemists on competitive terms. A service of information on shop fitting was being prepared.

The suggestion for a new sponsored line—an influenza and headache powder—came in a resolution from Preston and District Branch. Its mover, MR. I. ANDERTON, said the powder would have great scope against a product with a virtual monopoly, could reflect credit on pharmacy, and would be a weapon if price-cutting spread. MR. F. SMITHSON, Preston, who seconded, thought that more and more the N.P.U. would have to produce nationally distributed packed goods.

MR. J. JAY, St. Annes, was against the proposal. Headache powders were promoted by publicity, he said. Without that they were a waste of time.

MR. L. MOSSOP, Blackburn, suggested a sponsored corn plaster—an "ethical" product which would not require much advertising, which could be packed by the pharmacist on his premises, and of which "grosses a year" could be sold, but MR. TOMLINSON, Salford, said that corn plasters were outside the Marketing Committee's purpose, which was concerned with competing with the multiples.

The resolution was put to the vote and defeated.

(To be concluded)

Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

Trading Hazards

SIR,—A short reply to a very long letter. My shelves and drawers are full of goods for which manufacturers' advertising schemes came unstuck. Mr. Freeman, I'm afraid, is like a lot of our suppliers: he wants to run with the hares and hunt with the hounds.

H. G. A. CRIPPS,
Hitchin

Sixty Years Ago

SIR, — I was interested to see the photograph reproduced on p. 345 of the *C. & D.*, March 26. I was a student at the Westminster College of Pharmacy and I think it must be my photograph at the end of the second row on the right. I wonder how many of the group are still alive.

E. C. NEWMAN,
(A director, PHILIP HARRIS, LTD.),
Birmingham, 3

Retailers and Their Staffs

SIR,—The observations of Mr. David J. Jordan (*C. & D.*, April 2, p. 369) merely repeat what has been said many times before; they are not very helpful to the hundreds of retail chemists who are struggling to maintain a National Health Service dispensing service without sufficient staff. Many of these men, who qualified in the nineteen-twenties and thirties, are seriously worried about the immediate future. It is impossible to pay the "scarcity value" wages at present in vogue out of the £70 or so per month allowed for about 1,250 prescriptions, and that represents one man's work. It therefore follows that we *must* employ unqualified staff to count the tablets and capsules which comprise so large a proportion of all N.H.S. requirements, and if we occasionally sell a camera (plus, we hope, a case, film, filter and lens hood), who can blame us? The profit on the camera helps to provide employment for local people, and I for one prefer retail pharmacy as it was in 1939 to the mess we are in today. I even enjoy selling cameras as an alternative to counting dextro-amphetamine tablets for stout ladies whose only real requirement is less food! The majority of established dispensing chemists' shops in Britain today are owned and run by pharmacists with a simple "M.P.S." diploma, not a university degree. Is it suggested that these men, because of their "inferior" qualification, are unfitted to be dispensers in 1960? Most of them are highly efficient and extremely accurate workers, and could teach quite a lot to the new types coming in today—in limited numbers. A new and completely revised attitude to retail pharmacy from the Council of the Society is overdue, and I suggest, as a short-term policy only, allowing all dispensers with over ten years' experience to dispense without qualified supervision for at least three hours per day. (The proprietor would be responsible for errors, if any). That would allow elderly retail men to ease off a little, and it might save many from early breakdown or worse. Then we should allow a "retail" man to qualify on, say, five General Certificate of Education subjects at "O" level, followed by two years' pre-academic training, followed by a two-year course at a recognised college of pharmacy. Only thus can we hope to save retail pharmacy from gradual destruction by the Council we employ to safeguard our interests.

PATRIX

A Gain in Total

SIR,—In his letter in the *C. & D.*, April 2, p. 369, Mr. Brean has compared quite correctly two orders for Milk of Magnesia products. Andrews and Delrosa on our old and new trading terms. The total untaxed value of the combined orders on the new list prices works out at £16 3s. 5d. We submit, however, that with the new display discount rates that order would have been increased to £20 parcel size, thus qualifying for 7½ per cent. discount. In that event there would be additional display discount on the combined order at the new terms of an equivalent 8s. 1d. Assuming a projection of the same ratio of products to a £20 parcel the comparison would then appear as follows:—

Net value of the two orders —old terms				18	5	4
Value (include P.T.) of combined order—new terms..	19	8	0			
Less: Display discount at 7½ per cent.	1	4	3	18	3	9
Advantage to Mr. Brean ..					1	7

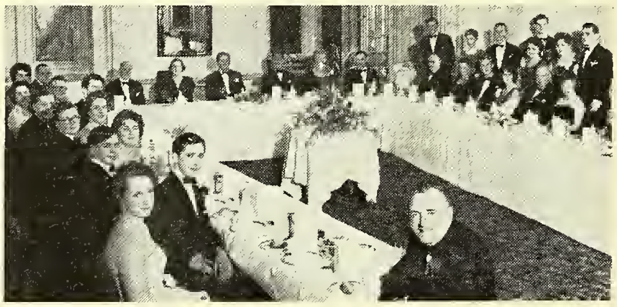
The annual rebate on "Delrosa" was discontinued at September 30, 1959, and a quantity rebate of 2½ per cent. on minimum orders of 5 doz. 6-oz. equivalent bottles was instituted on October 1, 1959. If that were applied to the Delrosa element of the invoice then the value would be decreased by 1s. 7d. (2½ per cent. on £3 5s. 3d.), and on the comparison he would break even. It is impossible to define a "typical" case, and the difference in profit to the individual chemist on the comparison of old and new terms depends on the weight of the respective Phillips' products to the Andrews and Delrosa within the order. Some chemists may be losing profit because of the above fact, but retail pharmacy gains in total.

PHILLIPS, SCOTT & TURNER, LTD.,
G. W. DAWSON, *Sales director,*
London, W.3

SIR,—Mr. G. W. Dawson has kindly sent me a copy of the letter he has sent you in reply to mine (*C. & D.*, April 2, p. 369). May I please add brief comments. I am glad that he finds my comparison correct. Notwithstanding his mathematical projection, the crux of the matter is ably summed up in the last paragraph of his letter—I am one of the chemists certainly losing profit on the new deal. However, I console myself by his assurance that retail pharmacy gains in total!

FRANK J. BREAN,
London, S.E.15

CELEBRATION DINNER: To mark their removal to new headquarters in the City of London, the directors and staff of Kimpton Brothers, Ltd., held a dinner recently. As importers and merchants the company have been trading for over seven-five years in the city.



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Trouble Over Tariffs

THE proposal of the European Economic Commission (the executive body of the Common Market, presided over by Professor Hallstein) to speed up the process of tariff reductions within the Common Market and to make a faster move towards establishing a common external tariff with the countries outside (*C. & D.*, March 12, p. 296), has undoubtedly shocked the countries not included in the community, especially those which have formed the European Free Trade Association (better known perhaps as the " Outer Seven "). The hope that a bridge between the two blocs might be built before July 1—the date on which the second round of tariff reductions is scheduled to take place—now seems further away from realisation than ever. That it is so is not due to any slackness on the part of the British Government. A meeting in Vienna during March of E.F.T.A. (of which Britain is the largest participant) offered to extend its own 20 per cent. tariff reductions to Common Market countries in return for similar facilities. They hoped that a satisfactory plan could be put to a subsequent meeting in Paris of both parties. That meeting, which was also attended by the United States and Canada, took place last week without any conclusions satisfactory to E.F.T.A. being reached. Deadlock now seems almost complete, the only remaining glimmer of hope being the fact that a further meeting has been fixed for the end of May and that the governments of the " six " have not yet given approval to the speed up. The German Parliament, for instance, after approving the plan in principle (see p. 424), postponed its final decision. It is thought July 1 will now be too early for drawing up all the new tariff rates, etc., thus a little extra time may have been gained. To what use it may be put remains to be seen.

Despite occasional declarations of neutrality on the question, the United States has consistently backed the Common Market, perhaps seeing in the organisation the birth of a United States of Europe modelled on its own pattern. The Americans may also see, albeit shortsightedly, the chance of a boost to their own exports, though that would be of short duration. American support for the " six " has no doubt embarrassed the " seven " still further, and the Prime Minister, when in Washington last week, apparently left no doubt in the American President's mind how seriously Britain views the prospect of two rival trading groups in Europe. It is to be expected, and hoped, that the Prime Minister will have done likewise to President De Gaulle during his State visit to London this week.

As the Chancellor of the Exchequer said in his Budget speech, " all hopes for Britain's commercial economic progress depends on the success of our exports." Should the governments of the six Common Market countries accept the Hallstein plan, a real testing-time for British exporters will set in sooner than expected.

Machinery Design and Performance

OFTEN the success or failure of the introduction of new machinery depends upon the method of presentation to the operator and his personal reactions when he first sees the machine. If the design of a new machine is pleasing, the problems of learning new techniques appear to be less formidable.

At a recent conference Mr. John Rodgers (Parliamentary Secretary, Board of Trade) explained the necessity of linking design with performance, and suggested that British machinery manufacturers should build up a prestige based on excellence of design from the point of view of the worker—the dial that is easy to read, the gear handle that is conveniently moulded, the light that is efficiently placed. Attention to such details would make a real contribution to productivity. The combination of excellence of design and performance is furthermore a necessity in the highly competitive export market.

This annual Drug-trade Machinery Number of THE CHEMIST AND DRUGGIST deals with machinery in which elegance of presentation has long been practised and in which good design is of necessity associated with a high degree of precision, and both are applied to a basic pharmaceutical art—that of weighing.

Like the pharmaceutical industry, the weighing machine industry is beset by legislation, but it has also to concern itself with varying local by-laws. Despite such complications and restrictions, new techniques and developments have been applied and demands for increased precision and output by the pharmaceutical and other industries have been successfully met.

Basic problems of design are also considered in relation to tablet punches and dies. The growth of the tablet era has been noted by all—primarily by the pharmacist but also for many non-pharmaceutical purposes. The precision of dosage now demanded in medicinal tablets is likely to become restricted to even narrower limits as more and more potent materials are devised by the organic chemist.

Such limits, together with the almost phenomenal outputs of the rotary tableting machines, have increased the problems of the designer of punches and dies. How those problems have been approached is shown in the second article of the special section. We hope both will be received as the valuable and timely contributions we believe them to be.

Onward from Galen

A CURRENT CAUSERIE

UNDER the headline " Tradition in Lettering " on April 4 the *Daily Telegraph* published a book review in which appeared the sentence: " Chemists have a particularly good tradition in shop-front lettering." That is well merited praise. To help make known how justified it is, the Editor offers a copy of the book reviewed (" Lettering on Buildings." *Architectural Press*, 25s.) for the best example, judged from photographs, which he receives before April 30. The criteria will be beauty, distinctiveness and suitability, without restrictions as to style or period. Prints should be on glossy paper, and preferably not less than ½-plate (4¾ x 6½ in.) in size (upright or landscape). The sender of any print not qualifying for the prize but reproduced in our columns will receive 10s. 6d.

* * *

In the district around Tain in Ross-shire, many folk share a common surname, and nicknames, accordingly, have become common. So it happened that many years ago, when Mr. Allan Robertson entered his uncle's pharmacy as a message boy, he came to be called " Shake the Bottle." That soon became—for convenience—shortened to " Shake," and Shake he has been ever since. Mr. Robertson now owns his own pharmacy. When he married, his wife was known as Mrs. Shake, and the children became " the wee Shakes." Shake's fame has subsequently spread even farther. Recently a Londoner, who had once met Mr. Robertson, wanted to get in touch with him again. He could not remember Mr. Robertson's name or address, but did remember that he was called by the unusual name of " Shake," and that he lived north of Inverness. He decided to try to locate Mr. Robertson by telephone. Asking to be put through to the Inverness exchange, he explained he wanted to get in touch with a man called Shake who lived in a town north of Inverness. The operator politely told him to hold on, and was back within minutes. " I can put you through now," she said, and the London man found himself speaking to Shake, the chemist in Tain.

* * *

In New Zealand, membership of a trade union is voluntary, and one signs a declaration to that effect when taking out the union card which, in order to remain in a job, one is compelled to have. There is even a Hobson's choice of union for New Zealand is, in a trade union context, a small country, and cannot cater separately for each specialist group. That is why, as chief pharmacist at the Grey hospital, Greytown, in New Zealand's South Island, Miss Barbara Norris found herself a member of the National Union of Shopkeepers With the Exception of Hairdressers and Butchers. What made the situation a little " iffy," to introduce a New Zealand colloquialism that would have many appropriate applications in this country, was that Miss Norris struck out the " voluntarily." [IF I make it obvious that I signed under duress, will the form be thrown back at me? IF it is not accepted, shall I be expatriated as having no job and being a charge on the community ?] In the event the " ifs " resolved themselves, for Miss Norris has held her post for two years, and expects to return to it after six months' leave in this country, during which time her duties at the hospital are being undertaken by another Briton: Miss Joan Miller.

* * *

The name of Thomas Beddoes, who was born on April 13 200 years ago, is now almost forgotten, despite his pioneer work in the application of chemistry to medicine. Born at Shifnal, Shropshire, Beddoes studied at Pembroke College, Oxford, where he gained a great reputation as a linguist. He had great powers of concentration, as shown by the fact that, after a game of whist, he could give the correct order in which the cards had been played. Beddoes, after graduating in medicine at Edinburgh in 1787, went to Paris, where he met Lavoisier. In the autumn of that year he became lecturer in chemistry at Oxford, and lectured there with great success until 1792, when the offence taken in certain quarters at a pamphlet written in vindication of the French Revolution caused him to relinquish his post, though the move was due in part to his desire to conduct experiments " to discover some part of the effect of oxygene air upon the animal economy." He held that " it appeared likely that its abundance or deficiency would . . . affect health. But is so salutary a revolution in medicine possible? I do not know, but is it not worth while to inquire? " Something quite new began with the opening of Pneumatic Institute associated with his name at Clifton, Bristol, in 1793, and indeed the investigations undertaken laid the foundations of inhalation therapy. In designing the Institute, which comprised a hospital with ten beds, an outpatient department, and a well-equipped laboratory and lecture hall, Beddoes was assisted by James Watt. Among the conditions studied were consumption, catarrh, and typhus fever. Beddoes concluded that the effect of oxygen was unfavourable in tuberculosis, but thought oxygen might be useful in sea-scurvy, " for no substances are better calculated than acids to impart oxygen to the system, for they contain it in abundance and they easily part with it." Like his young assistant, Humphrey Davy, Beddoes inhaled various gases in experiments on himself, and carried out experiments in resuscitating drowned rats by oxygen inhalation. He published reports on the external and internal use of nitrous acid in venereal diseases and other conditions, and with James Watt published the three-volume work " On the Medicinal Uses and Production of Factitious Airs," 1796. When Beddoes became absorbed with the pitiable conditions in which the children of the London poor were reared, the Pneumatic Institute closed. He founded a Public Health Institute at which a family could obtain medical care for an annual payment of 2s. 6d. Beddoes died on Christmas Eve, 1808.

RECENT RESEARCH

PLATING MEDIA AND RADIATION

Freeman and Bridges (United Kingdom Atomic Energy Authority, report 3204, 1959) have investigated the effect of plating media upon counts of irradiated bacteria. The sterilisation of pharmaceuticals and the preservation of food against radiation demand detection of the highest possible number of surviving organisms following irradiation. Details of the five culture media are given. Six bacterial strains were investigated. *Escherichia coli* and *Staphylococcus aureus* showed slight effects from the media tested. Survival was best on the richest media. Blood agar provided maximum counts of irradiated organisms. Oxoid blood agar base was used according to the makers' instructions and 5 per cent. of horse blood added. *Bacillus subtilis, Streptococcus faecalis* and *Pseudomonas* spp. showed no effect from the post-irradiation medium.

DETECTING ALPHA RADIATION

Examination of laboratory air monitors may disclose a gross alpha radiation count which should be identified for the safety of personnel concerned. Glover (United Kingdom Atomic Energy Authority, A.E.R.E.—M589) provides two methods of obtaining data from three types of filter paper. The first method requires a 1-in. diameter section from the centre of the filter paper to be mounted on a gridded ion chamber source holder using Apiezon N grease and analysing the alpha pulse. The technique is preferred because of its speed and better resolution; and because it involves no loss of activity. The second method requires counting in an alpha scintillation counter, destroying the filter paper in nitric and sulphuric acids; evaporating the dryness; dissolving the residue in nitric acid and repeating until all sulphuric acid is removed. The final residue is dissolved in nitric acid for estimation.

SEDIMENTATION WITHOUT ANTICOAGULANT

During *in vitro* studies of thrombosis, Chandler (*Nature*, 1960. **4714.** 697) devised a simple means of collecting blood without the addition of an anticoagulant to permit sedimentation. The details of the method are that polyvinyl chloride plastic tubing with a nominal internal diameter of 0·133 in. is used with a 19-gauge (U.S. standard) thin-wall, silicone-coated needle. At a distance of 64 cm. from the needle a silicone-coated three-way stopcock is inserted and a further 28 cm. of tubing is attached. The total sample withdrawn is 10–11 mils and of that quantity 2 mils flows from the tube end and is discarded. The stopcock is closed and the shorter (28-cm.) length of tube is withdrawn, clamped at 6-cm. intervals, and suspended. The plasma layer is measured in the first section after 30 min. and the three lower sections examined at 30-min. intervals to check for clotting. Sedimentation rates are thereby determined.

PUNCHES AND DIES FOR TABLET MACHINES

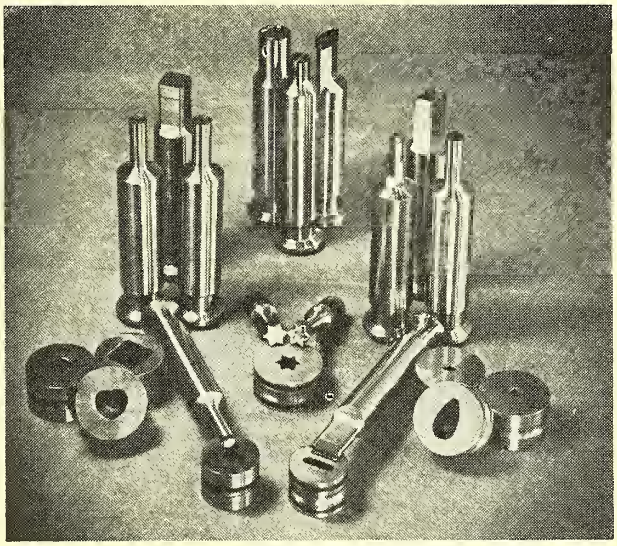
J. C. GASKELL

Works manager, Manesty Machines, Ltd., Speke, Liverpool, 24

The design of punches and dies for tableting machines must constantly be undergoing improvement to meet the ever more exacting standards demanded by industry

MANY of the products of the pharmaceutical and a growing number of other industries are made by compressing powders on single or multiple-punch tableting machines. The quality of the products depends in no small measure on the quality of the punches and dies—the tools which actually compress the powders.

The writer's present concern is with the design and manufacture of the punches and dies for the multiple-punch or rotary tablet machine, an up-to-date model of which is capable of outputs from 1,000 to over 5,000 tablets per minute. A machine running off over 5,000 tablets per minute will produce, in a working period of eight hours, well over 2 million tablets. It is not difficult to realise that for such outputs the punches and dies must be well designed and made. Inferior tooling can, at those high rates of production, mean a heavy loss in output due to poor quality tablets, stoppages for cleaning, and tool replacements. Even at moderate and low rates of output such losses are to be avoided.



1. A selection of punches and dies for compressed powders.

Punch Design

The overall dimensions of punches and dies are decided when the machine in which they are to be used is designed. The dies are dimensioned so that they will be a good fit in the die table to ensure accurate alignment with the punches, and are provided with an efficient means of being locked in position so that they will not lift when the tablets are ejected. The punches must work easily in their guide holes, their heads must ride smoothly over the cams to keep wear down to a minimum, and the form of the top of the head must be designed so that the pressure applied to the powder is not a hammer blow but rather builds up gradually and is then held at its maximum for a short period. That makes for good tablets and keeps down the stresses on the punch head. So much for the overall dimensions. Material, hardness and clearance between punch tip and die bore can be fixed only when the designer knows the characteristics of the powder to be compressed.

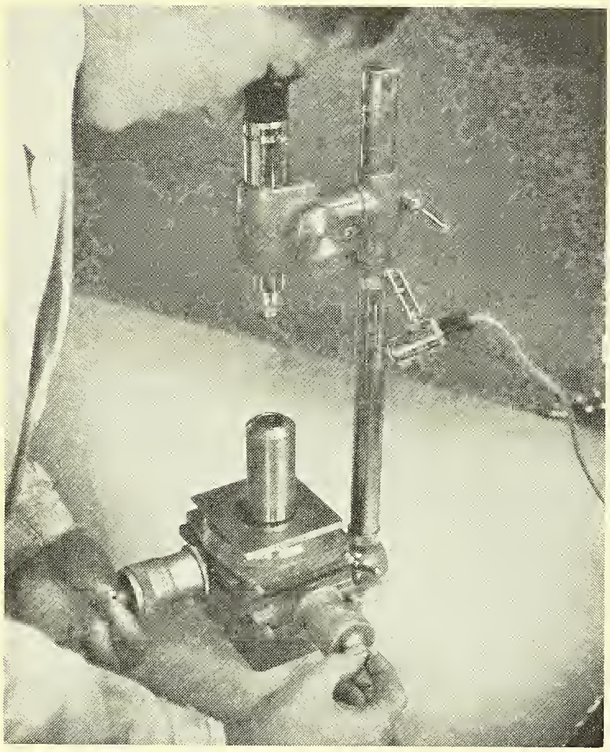
Nearly all punches and dies are made from tool steels, of which there is a whole host to choose from. However, it has been found that about half a dozen cover nearly all necessary requirements, and that is fortunate inasmuch as it enables the manufacturer who specialises in the production of punches and dies to buy those steels in large quantities in a condition suitable for machining, and to hold them in stock for immediate use. There are, however, many instances when the powder to be compressed is abrasive or corrosive, or has other properties which demand that the punches and dies shall be made of a special material if they are to give an economic working life. In those situations the designer has at his disposal such materials as tool steels with high carbon and chromium or other alloy content, tungsten carbide and stellite where operating conditions are particularly severe, or he may call for the punches and dies to be made in the standard tool steels and have the punch tips or die bores plated with a layer of hard chromium.

The punch tip itself may present him with special problems. For instance, if it has a deep concave or a similar form which gives a fine delicate edge he must specify a steel which, in spite of the inherently weak design of the punch, will give the tip strength to withstand the high bursting stresses to which it will be subjected.

In choosing a material for punches it has always to be borne in mind that they have to resist what almost amounts to shock loading, and so punches must never be so hard as to be too brittle to withstand this load. Those and many other problems are solved by the choice of a suitable material, a choice often dictated by long experience and close connections with customers and their own special difficulties.

Punch Clearances

Clearances between punch tips and die bores must be large enough to allow the air to escape from the powder at the point of compression and yet not so large as to leave an ugly flash on the tablet. They must be large enough to prevent powder binding between the punch tip and die bore and yet not so large as to allow the powder to escape freely past the punch down into the working parts of the



2. Inspecting a master punch.

machine, where it would dry up the lubricating oil, causing the punches to stick in their guides and the punch heads to be damaged.

As with steels, the supplier who manufactures punches and dies in large quantities can standardise on clearances for a great majority of his orders. He can take advantage of standardisation to carry stocks of finished punches and dies to enable him to give quick delivery and help keep down manufacturing costs by producing in large quantities. The very fact that a manufacturer stocks finished punches and dies is in itself a guarantee that all punches and dies of a given tip diameter are interchangeable. Interchangeability is a big advantage to the user when replacements have to be made, and even more so when setting up a machine or even cleaning the tools during a production run. There is never the danger that a punch will be put back in the machine to work with a die too small for it. Interchangeability can apply not only to "round" punches and dies but also to "shaped" ones, which can be made interchangeable without sacrificing the close clearance between tip and bore.

Many occasions arise when the standard clearances have to be modified. Perhaps the material is extremely fine and the punch tip must be made to fit the die bore more closely. Perhaps high production rates are demanded such as can be achieved only by increasing clearances. The specification of clearances of itself presents no problems, but standardisation carries with it such enormous advantages that the manufacturer who specialises in punches and dies keeps in close contact with users and is always ready to change his standards so that they may be used over the widest possible fields and help him to ensure as satisfactory service as it is possible to give.

Manufacture

The process of manufacture may be divided into three stages: machining before heat treatment, heat treatment; and finishing. Apart from the precautions that are normally taken, namely making sure that there are no sharp corners or deep tool marks, which would result in failure during heat treatment, and leaving an adequate amount of grinding allowance, the main point of interest in the first stage is the production of the "master" punch in cases where punch faces carry lettering or designs. The engraving or embossing on a punch face must be such that it will give a clear-cut impression on the tablet. To that end great care is needed to ensure that the punch faces are completely free from tool marks, and that there is adequate "draw" on the lettering or design so that the punch will part cleanly from the tablet.

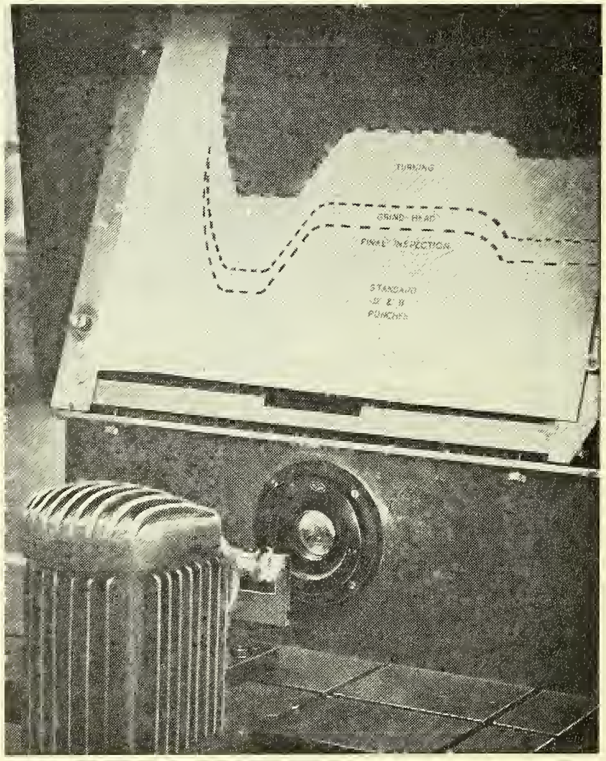
The engraving or embossing on punch faces often involves small characters that must nevertheless without exception give good appearance to a tablet and often pass stringent dimensional checks. Illustration 2 shows a master punch being checked.

In the second stage, heat treatment, the tools are given the correct hardness and a good grain structure. Hardness may be easily checked by any one of several well-known methods, but a bad grain structure only becomes apparent when the tools are put into use, fracture soon revealing the internal structure for what it is. Fortunately with the exercise of care and by using good temperature-recording instruments the heat treatment of tool steels to give both the correct hardness and structure is not difficult and may be regularly achieved.

Avoiding Problems

Other pitfalls to be avoided include decarburisation of the metal surface to leave a soft skin that can be easily abraided away, and oxidation of the faces of engraved or embossed punches from exposure to the air at high temperatures; either of these can nullify the work of the tool maker. It may be as well to point out here that many of the problems met in hardening can be minimised or indeed eliminated by intelligent design. Sharp corners and sudden changes in section only lead to internal stresses being set up which, if they do not lead to failure during the heat-treatment processes, may prove too much for the tools when they are actually put into production.

At the third stage, finishing, great care has to be taken that no tool marks or other stress raisers are left on the surface of the punches, and special attention has to be paid to overall lengths, head forms and the polishing of punch faces and die bores so that, when those tools are fitted into a



3. Inspecting the contour of a punch head on a projector.

4. Illustration of polish on a punch face.

machine, each station produces as nearly as possible a tablet having the same weight, thickness, diameter, hardness and appearance as all the other stations. To achieve that aim overall lengths and head forms must be held to close dimensional tolerances. Each has a bearing not only on the weight but also on the thickness and hardness of the tablet. It is easy to realise how the length of a punch as it passes over the weight adjusting cam helps to control weight and, as it passes over the pressure rollers, hardness and thickness. What is not so easily understood is the part the head form plays. Let the reader consider a lower punch, which is not falling freely after tablet ejection. Such a punch has to be pulled down by a cam. Should the head be thin then it will not be pulled down as far as the punch having a head of the correct thickness, and that can lead to a tablet being under weight when the machine is being used at its maximum depth of fill. Furthermore if punches in a set have head contours that vary appreciably from one to the other, then tablets are produced which will have varying degrees of hardness, because the time during which they are under pressure will vary. Illustration 3 shows a punch head being inspected on a projector.

Finishing Operation

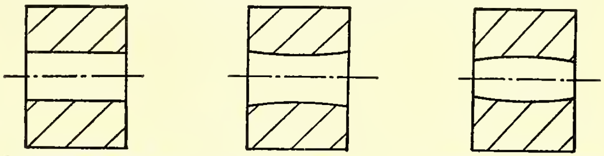
Another important finishing operation is the polishing of the punch faces. That helps give the tablet itself a smooth and shiny surface and reduces any tendency for powder to adhere to the punch face; in addition it enhances any resistance to corrosion that the steel from which the punches are made may have. High polish must not be obtained at the expense of the geometrical accuracy of the punch face. The edges of concaved punches must not be rounded, and any engraved or embossed design must not have its sharpness impaired. The finish on the face of the punch shown (illustration 4), which quite obviously has retained its accuracy, was obtained by five separate grinding and polishing operations.

The bores of dies must also have a fine finish, in order, as in the case of punches, to give a smooth, shiny appearance to the tablet; to improve the corrosion resistance qualities of the steel from which the die is made; and to ease the ejection load. Once again the degree of finish must not be obtained at the expense of geometrical accuracy. Wear in a die bore occurs at the point where the tablet is compressed and shows up in the form of a ring. If it is indented at that point by carelessness or lack of attention to detail in the finishing operations, obviously it will be " partly worn " before it is even put into service.

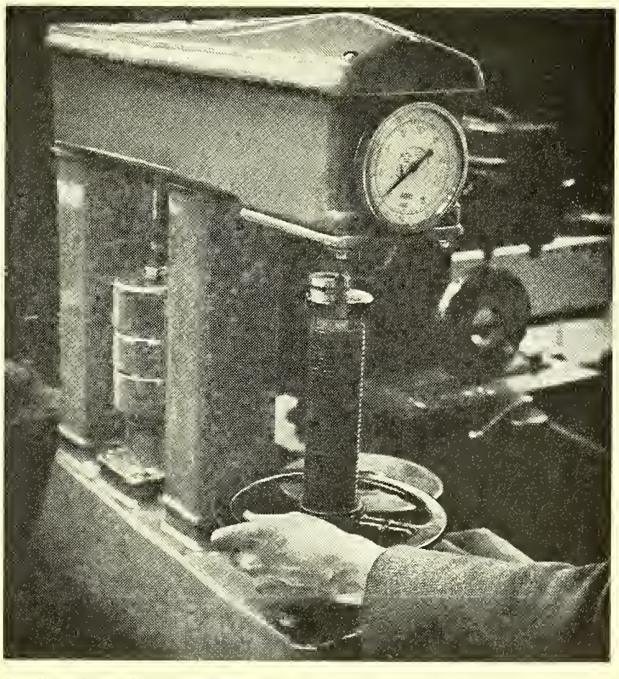
The inspection department is the agency by which the manufacturer measures the quality of the punches and dies he is producing. To visitors the equipment used to measure and check is often the most fascinating thing they see when touring a punch and die department. Besides the projector for measuring head forms, and the tool maker's microscope for checking the accuracy of master punches, to which reference has already been made, the visitor would see instruments for checking hardness (illustration 6), fixtures for checking dimensional accuracy (illustration 7), surface measuring instruments; and special equipment for measuring die bores and discovering cracks in tools not visible to the naked eye.

Fine Limits

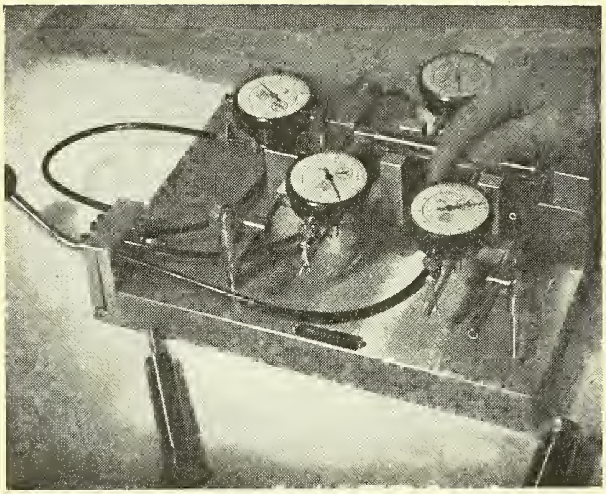
The last two pieces of equipment are worth a little more explanation. To start with the die bores, it is not sufficient to use a plug gauge and to be satisfied that the bore is the correct diameter. It is also necessary to know what shape it is. The diagrams show what is meant by the expressions parallel, bell-mouthed and barrel-shaped, though the last two have been grossly exaggerated for purposes of clarity. Normally the effects are measured in 10,000th parts of an inch, so it is immediately obvious that special measuring equipment is required. Why is it necessary to measure the shape? A die bore has only to wear by something in the order of 0·0002 in. oversize at the point where the tablet is compressed for that tablet to break on ejection. Obviously then a new die bore should not show any barrelling. In fact it should be either parallel or slightly bell-mouthed.



5. Illustration of how a die bore can vary in " shape," left to right: Parallel; bell-mouthed; barrel shaped.



6. Checking a die for hardness.



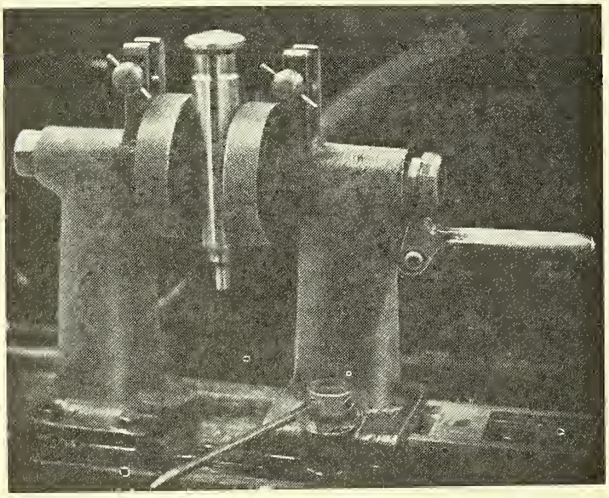
7. A punch receiving its final check.

The second piece of equipment, the crack detector, is used to show up cracks not visible to the naked eye which may have developed during the manufacturing of the tools (for instance during quenching when being heat-treated). Without that check faulty tools would leave the works and would probably fail early on in their life. It is reassuring both for the manufacturer and the user to know that the new tools are completely free from cracks and that there is never any danger of their failing from that cause and perhaps doing considerable damage to the tablet machine and delaying production.

Packing

Having exercised great care in designing, manufacturing and inspecting punches and dies, they must obviously be carefully packed for dispatch. They are first of all coated in a tough resilient plastic which not only protects them against corrosion for a long time but also guards them against rough handling. They are then placed in special packs inside the packing case. That prevents the punch tip (the most delicate part) from coming into contact with the side of the packing case.

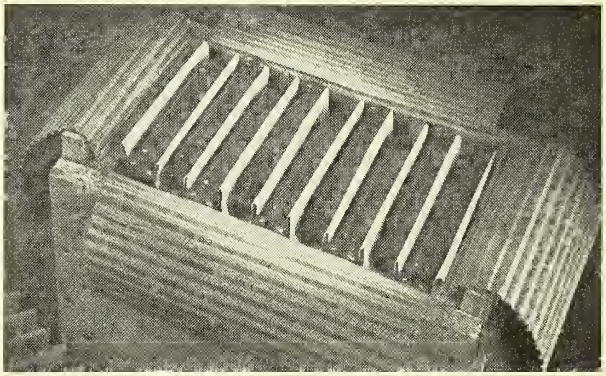
This account has dealt almost exclusively with punches and dies for the rotary-type tablet machine, but one aspect of the tooling for single-punch machines is worth looking at, namely the alignment of punches and dies when multiple tooling is used. To achieve that alignment particularly when the clearances between punch tip and die bore are small the manufacturer must make use of a jig grinder. No matter how stable tool steels are during heat treatment—and they are very stable—there is always a slight movement, and the distance between the die holes in any one die varies no matter how accurately they were machined in the first place. The jig grinder is a machine tool that not only enables those holes to be ground to the correct size but also ensures that the spacing of the holes relative to one another is within the tolerance demanded by the designer—a tolerance which is usually close.



8. Inspecting a punch for cracks on a magnetic crack detector.

Constantly Improving

It should now be clear that the design and manufacture of punches and dies for tableting machines is a specialised business and one that is best understood in all its details by the manufacturers of the tablet-machines themselves. They, after all, are the people who designed the machines and the tools the people who are always most interested, therefore, in customers' extracting the maximum production from their equipment. For that reason makers are constantly improving the punches and dies to meet the ever more exacting demands of the industries they supply. They are, of course, in an advantageous position, having contacts with many industries. That gives them a broad-based knowledge of tooling requirements, and the knowledge is " built into " the punches and dies they make, along with the first-class materials and manufacturing skills already referred to. In addition, they have laboratory facilities enabling tooling and other problems to be examined experimentally—facilities the success of which is shown in many ways not least of which is the way customers return again and again with new problems for solution. Often, indeed, the name of the manufacturer is the purchaser's only guide to quality.



9. Punches in their packing case almost ready for dispatch.

A PHARMACIST'S ANTHOLOGY

A POWDERING THAT SAVED A LEG

From *The Letters of Private Wheeler*, June 14, 1814.

It was at length agreed to amputate my leg, this I joyfully agreed to, being heartily tired of such a frightful troublesome member. Twice were I removed to the surgery to undergo the operation, but each time the little Spanish Doctor, who had charge of me, overruled it and I was taken back to my bed. I understood my Doctor wished to try something else, then if that failed the leg was to come off. He brought from his home a small bottle filled with something like pepper and salt mixed, with this he covered the wound on which he put lint, bandaged it up, crossed himself, muttered something to himself and left me. Several times that day he visited me and my answers to his questions seemed to perplex him very much. The next morning my answers seemed to please him, he took off the bandage in good spirits—when all the sluff excepting two spots, one about the size of a sixpence, the other smaller, come off with the lint. My wound was now changed from a nasty sickly whitebrown colour to a bright read. He capered about like a mad fellow, called the other doctors who all seemed surprised, he put some more stuff out of the bottle on the spots. . . . Since then my wound improves surprisingly.

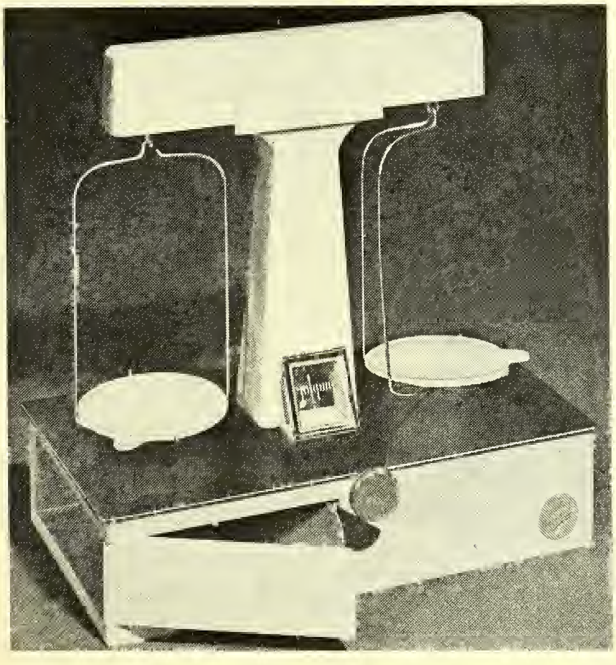
C. & D. SPECIAL ISSUE ON DRUG TRADE MACHINERY

WEIGHING MACHINERY

Accurate weighing is a basic requirement in pharmacy, whether in the dispensary when dealing with individual prescriptions or in the factory on the production lines. Some legal and technical aspects are referred to in the following article.

TO appreciate the advances made in the design and construction of weighing instruments in this country, it is necessary to have some knowledge of weights and measures law. Without that knowledge it is difficult to understand the distinction drawn between "trade" and "non-trade" machines, a distinction in some respects radical if not necessarily decisive.

Long overdue for severe revision, the Weights and Measures Acts, dating back to 1878, apply only to weighing machines used in trade. Trade is defined by section 19 of the Weights and Measures Act, 1878, as "Every contract bargain sale or dealing made or had . . . for any work goods wares or merchandise or other thing which has been or is to be done sold delivered carried or agreed for by weight or measure. . . ." Thus whenever any transaction involves weight or measure as its basis the Weights and Measures Acts apply. That legal definition of "trade" has even been held by the courts to extend to checking-in as well as to the actual making-up of goods by weight or measure. That interpretation of the meaning of trade, albeit a wide one, has led to certain differences in the standard and manufacture of "trade" and "non-trade" scales and weighing machines. While "trade" machines must comply with the requirements of the Weights and Measures Regulations, 1907, and be examined, verified and stamped by an inspector of weights and measures before being put into use for trade, the "non-trade" machine is free from such requirements and may be designed and constructed more to the wishes of the buyer and maker.



The 3½-in. glass goods pan is a feature of the White Monarch dispensing balance (Wm. A. Webb, Ltd., Ilford, Essex).

To avoid the anomaly of talking about "non-trade" (in the legal sense) machines being used for what certainly is trade (in the wider everyday sense), it is less confusing to speak in terms of "regulated" and "non-regulated" machines. Freedom from the requirements of the Regulations has led to two quite opposite results. On the one hand some non-regulated scales are well below the standards set by the Regulations and are less accurate, less robust and, in general, cheaper to buy. On the other hand, principally in weighing machines used in industrial and manufacturing processes, advanced designs are frequently adopted which are ahead of those approved for regulated scales and machines. At the same time the accepted standards of the Regulations tend to restrict, or channel on similar lines, the features adopted in non-regulated machines, if only for the reason that a machine suitable for both regulated and non-regulated use is at least assured of a larger potential market.

There is, however, a half-way stage whereby inspectors of weights and measures may accept certain weighing machines for verification and stamping provided they are marked with the legend "For factory use only." Such machines generally possess features that comply with all but one or two of the requirements of the Regulations, making them suitable for factory use but not for retail trade.

A Growing Conflict

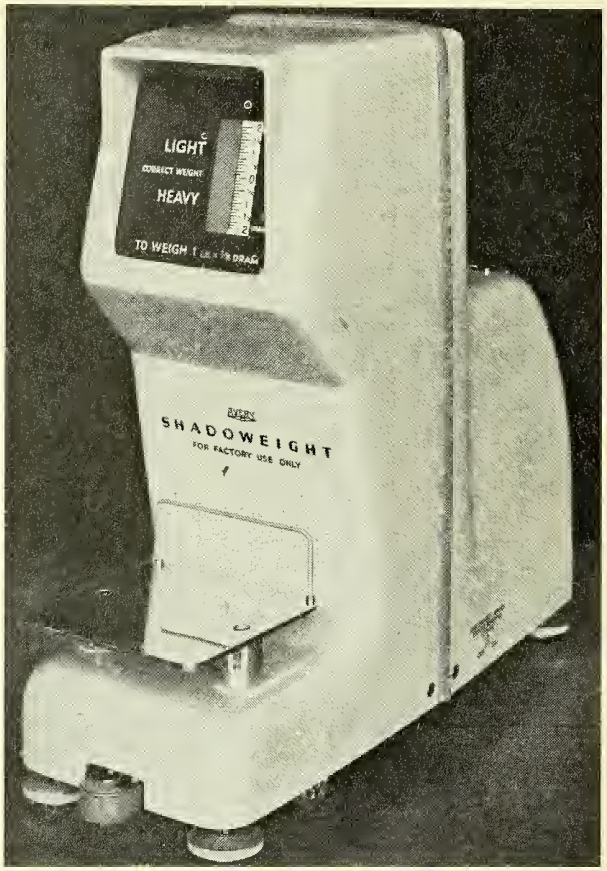
The Regulations themselves prescribe tests for accuracy and performance, robustness of design and construction, reasonable freedom from error development, and comparative freedom from possibilities of fraudulent manipulation, all of which are recognised as desirable characteristics in non-regulated machines as well. In this present age there is a growing conflict between accuracy and speed of operation (or output), because accuracy takes times and because to the trader the cost of labour may be greater than the cost of raw materials. Under the Regulations, however, accuracy cannot be sacrificed, and few would argue that that is unreasonable. On the other hand there is little doubt that, in an age of mass production and mass packaging, accuracy is equally important, for overweight becomes a matter of considerable economic importance to the manufacturer or packer when hundreds of thousands of packets may be weighed up weekly or even daily.

The Acts further require that all new appliances that possess novel features and are intended for use in trade shall be approved by the Board of Trade before they are accepted by an inspector for verification and stamping. Under that power the Board of Trade can approve machines for factory use only. While no machine can be said to be completely fool- or fraud-proof the Acts and Regulations provide, as experience has proved over the years, reasonable assurance against serious errors arising from wear and tear and minor manipulation.

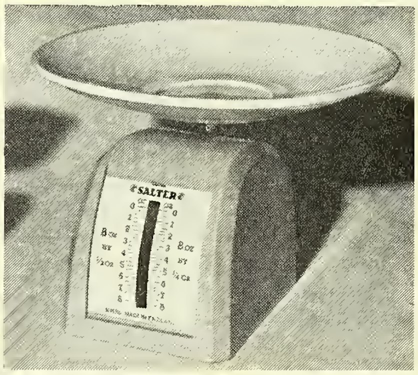
Machines Used in the Pharmacy

The weighing machines used on the retail side of pharmacy have always followed the simpler designs, and have changed comparatively little, especially in basic principles, over the centuries. It is a fact that the Beqa beam, dated about 7000 B.C., remains the pattern for the modern dispensing beam scale, and its long history is but proof of its accuracy and proficiency. In part that is due to the high degree of accuracy required in dispensing, which does not lend itself to intricate design or novel construction. A detailed description of the beam scale or its principle of construction is not necessary. They remain the same: a single equal-armed beam fitted with centre, and terminal steel knife-edges that work in steel or agate bearings with the pans suspended from the terminal knife-edges. The only real difference between the modern dispensing beam and the Beqa beam lies in the method of suspension, steel knife-edges and bearings having replaced the hole in the centre of the beam from which it was suspended and the holes in the ends of the beam through which the string supports of the pans were threaded and suspended. The principle of construction is such as to allow great accuracy where it is most required, that is in the lateral and vertical position of the knife-edges. Modern engineering skill now permits that to be done even with mass production. To the basic beam has been added the modern accoutrement of dustproof casings and decorative finishes which improve appearance but add little to accuracy. The last statement is, perhaps, a little too categorical for there have been certain recent developments which at least make for improved convenience whilst maintaining existing standards of efficiency, especially in the use of the beam and the reading of the weighings. There is now a dispensing beam to which a graduated scale is added against which the pointer indicates the excess or deficiency.

That latest development has been further improved upon, in that a fixed magnet has been placed in the inside of the top housing, in the field of which a metal vane attached to the top centre of the beam moves. The magnet exerts a damping effect on the oscillations of the beam and speeds up the reading of the indications.



Designed for factory use, the Shadowweight scale indicates the extent of over or underweight from the standard (W. & T. Avery, Ltd., Birmingham).

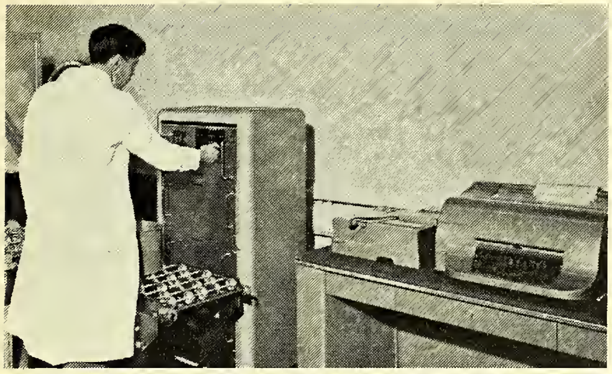


When the baby basket (above) is removed, adults and children may be weighed on this all-purpose machine (Herbert & Sons, Ltd., London, E.C.1). At right, a dietary spring scale with plastic pan and casing (Salter & Co., Ltd., West Bromwich).

Although dispensing beams have long been accepted as being "in use for trade," there still arises an occasional conflict of opinion between chemist and inspector as to whether that is so. A careful reading of the definition of trade, given earlier, cannot but support the view that they are used "for trade." Any chemist who argues against dispensing beams being in use for trade is—all considerations of law apart—going against the best interests of his reputation and that of his profession, for the verification, stamping and regular inspection of the scales is a guarantee of original and continued accuracy. There is no doubt whatsoever of the value of such inspection, both to the chemist and to his customers, whether the beam be used for ordinary sales or for making up prescriptions.

The accuracy limits, prescribed by the Regulations, for such beams are as follows:—for a 1-oz. beam, when new or after repair, the amount required to produce an appreciable movement in the beam when it is fully loaded (sensitivity allowance) must not exceed gr. 0·2, while the greatest error in excess or deficiency when fully loaded must also not exceed gr. 0·2. On inspection—that is when the beam is in use in the chemist's shop—the sensitivity allowance is doubled and the error allowance trebled. For a 2-oz. beam scale the allowances are 50 per cent. greater.

Before turning to other scales used in retail pharmacy, attention must be drawn to Regulation 75 of the Weights and Measures Regulations, wherein it is stated that weighing instruments brought into use in certain special trades must satisfy the requirements for certain special classes of instruments. Retail pharmaceutical chemists are in the first class of the special trades, and they are required to



An electronic control system that can be fitted to most types of scales; it enables weights, time, and other details to be printed automatically on a typewriter or teleprinter (E.M.I. Electronics, Ltd., Hayes, Middlesex).

use Class A or B instruments, which must comply with special sensitivity and error allowances. Those already given for dispensing beams comply with the special allowances, but it is now necessary to consider the application of the special allowances to the other scales used in chemists' shops. Without going into too great detail, the special requirements mean that a chemist may use any type of scale to weigh such substances as bath salts, but a Class B scale must be used for weighing up such substances as boric powder. That requirement gives rise to argument between chemist and inspector, but again it should be pointed out that often something larger than a dispensing beam is needed to weigh up drugs in quantities of, say, 1 or 2 oz. The best advice, therefore, is for retail chemists to make sure that a Class-B beam scale is available for such purpose, as being the only machine, in the ordinary run of things at present, that will give the required degree of accuracy. In some chemists' shops scales of other types are used for weighing up non-medical commodities, but little mention need be made of them. Normally they are of about 2–4 lb. capacity and take the form of small counter machines or small self- or semi-self-indicating counter machines. With the rapid growth of prepackaging, many of those scales are falling into disuse.

In buying weighing machines of any kind it should be fully understood that (a) the inspector's stamp is a guarantee of all those things set out above; (b) most scales need to be level if they are to be and to remain accurate; and (c) it is wise to buy a scale of a capacity little if anything above the maximum weight that will normally be weighed. To illustrate the last point, the permitted error on a 2-lb. counter machine when in use is 3 drams, while on a 14-lb. machine it is 9 drams but, as those errors are not applied proportionally according to the load, it is possible, if the larger machine be used for weighing up 1-oz. or 2-oz. lots, for the lots to vary from 9 drams over to 9 drams short. Therefore, if the normal trade is in ounces, it is uneconomical to use a 7-lb. or 14-lb. scale, and a good trade in both ounces and pounds would make it desirable to have two scales of appropriate capacity.

Manufacturers and Packers

On the manufacturing and wholesale side of the pharmaceutical industry there have been quite astounding advances in weighing-machine design and construction. That is especially true of machines designed for weighing or check-weighing packages and for weighing materials for mixing and processing. It is impossible to keep in touch with all the latest developments, for there is much truth in the statement that once a weight indication could be turned into an electrical impulse there was no limit to what could be done in the way of process control and methods of weighing.

On that side of the trade the distinction between regulated and non-regulated machines becomes more marked, and for that reason it is preferable to refer first to regulated machines which, for the reasons stated earlier, have developed more slowly and have remained fairly true to basic principles of construction. In general trade and industry the beam scale, counter machine, self- and semi-self-indicating machine, and the platform machine, both in their usual form and with certain improvements, still hold sway for weighing where output and speed are not of primary importance.

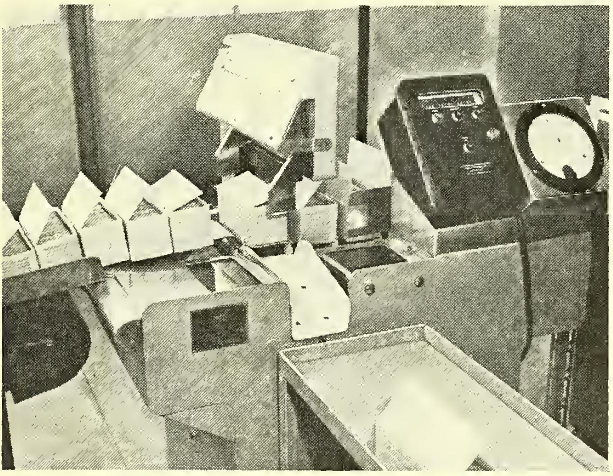
The beam scale has shown the least change, though reference has already been made to the one fitted with a magnet for damping the oscillations. From the beam scale have been evolved, for use in factories, several small weighing machines that give excellent results when weighing small quantities of substances to fairly fine limits.

From the ordinary counter machine an infinite number of other machines have been evolved, including self- and semi-self-indicating machines fitted with weight and price charts, machines for weighing small quantities and controlling the rate of feed during weighing, and special machines for check-weighing. There are so many that there is little point in attempting a detailed description. The basic change has been from the equal-armed levers used in the ordinary counter machine using separate weights, to machines in which the weight of the goods is transmitted via the weighing levers to cams and pendulums which are connected to an indicating pointer working against a graduated chart or to a rotating graduated drum working against a fixed pointer or indicating wire. Thus visual indication of weight is leading to abandonment of the use of separate weights.

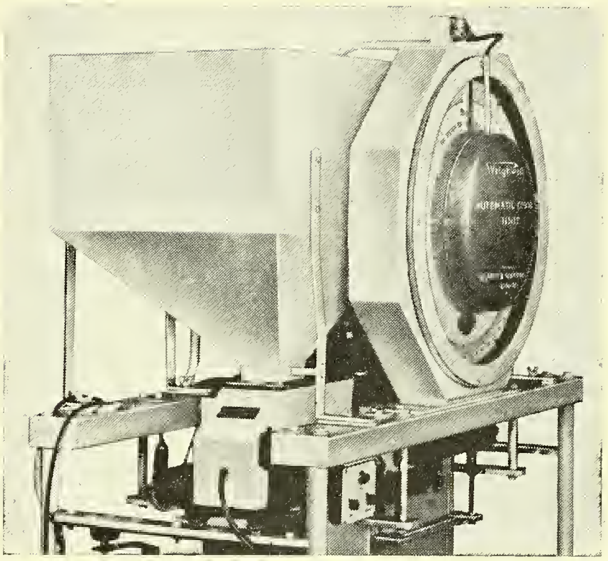
Electronic Developments

As the recent developments in electronic weighing machines are new to many, the description of the everyday type of machine has been sacrificed so that more detail may be given of the latest machines. In doing this it must be understood and appreciated that the descriptions and illustrations are used only to describe the general developments, and not necessarily the developments of any one machine or any one manufacturer. There is a fairly wide choice of such machines from quite a number of manufacturers, and there is a limit to the number of illustrations that can be used and the descriptions that can be given. Those that are used are in many respects indicative of the ways in which electronic devices are being incorporated into present-day weighing machines. No attempt will be made to classify the machines to be described into regulated and non-regulated.

The platform machine, like counter machines, has been



An electronic high-speed check weigher; speed and accuracy depend largely on packed shape and stability of the contents, but speeds in excess of 100 packages per minute are commonly attained (Solartron Industrial Controls, Ltd., Farnborough, Hants).



This transistor cut-off unit is adaptable for repetition weighing or to the automatic batching, blending or filling of multiple ingredients, whether powdered, granulated or liquid, to any desired formula (Berry and Warmington, Ltd., Liverpool).

fitted with dials and charts, and the age-old but still accurate steelyard has been superseded in a number of machines by transferring the weight transmitted by the levers to cams and pendulums which, in their rotary movement, actuate a pointer so that it revolves round a graduated dial. Such machines are now well established.

It was from the dial platform machine, with its revolving pointer, that the principal developments in electronic fittings sprang. Nevertheless earlier machines had been used to actuate electrical contacts, many of them of the make-and-break type, which were attached to appropriate parts of the weighing mechanism so that the movement of the weighing beam or lever actuated the contact. Such machines, and there are quite a number made by different makers, have proved highly satisfactory, and hold their place against the newer "electronic" developments. Quite naturally those first electrical developments were designed to control the weighing operation, and both equal-armed and unequal-armed machines were adapted, the electrical contacts being used to control (a) the commencement of the feed; (b) the reduction of the amount of the feed when the desired weight was nearly reached; (c) the cut-off of the feed when the required weight was on the scale; (d) the discharge of the correctly weighed load; and (e) the starting of the process once again.

But a Step

With the fitting of revolving pointers, both the movement of the pointer and its spindle could be used to operate photo-electric cells, photo-electric transistors and transducers. Photo-electric cells and transistors could be operated in two ways—the pointer could either permit a light to shine on the component or interfere with a light already shining on the component, both of which would actuate the component and transmit a signal to a control box from whence subsequent controlling signals could be relayed not only to the feed control but back to the scale itself and to other operational units. By inserting several components at various points on the arc covered by the pointer, quite complicated operations could be automatically operated and controlled. From those developments it was but a step to a master control box or panel. Such a panel can incorporate many features including (a) remote indication and recording of weights; (b) warning lights and bells; (c) ticket printing with weight and/or price; (d) calculators; (e) electric typewriters and teleprinters; (f) card and tape punches for recording operations and/or ordering the operations of the process; and (g) complete automatic control of all operations and materials even if they vary in weight, and other physical characteristics.

One of the latest developments offering the foregoing features uses a transducer in place of the "electric eye" type of component. The transducer is attached to the spindle which carries the pointer of the weighing machine and the revolution of the pointer turns the transducer, varying the electrical current passing through it. That variation in current actuates the control unit whereby the operations of the weighing machine, feed of material and all connected equipment may be operated and controlled.

An Explanation

The foregoing has been an attempt, in somewhat elementary terms, to describe modern developments in electrically controlled weighing machines for the benefit of those who profess little or no knowledge of electronics. To the lay mind the inside of a television set is beyond understanding, and it is quite true to say that the electrical equipment now being incorporated in weighing processes is equally incomprehensible to the uninitiated. For their benefit also an explanation of certain terms, already used and to be repeated, may be useful. Photo-electric cells are components which generate a small electrical current when a light falls upon them. Photo-transistors, a modern invention whereby certain sensitive elements possessing great stability and permanence are used, are also actuated by a light shining on them but in their case the light varies the amount of current already passing through them. Transducers as used for that purpose are mechanical means of varying a small current already passing through them. Like all definitions which attempt simplicity, the explanations given are condensed and doubtless incomplete, but they serve the purpose of this article.

To try to present a clearer picture, a slightly more detailed examination of one or two of the latest machines may help, but readers are reminded of the earlier warning that such descriptions are aimed to be general and are not necessarily confined to the machines illustrated.

In one machine a series of adjustably mounted miniature photo-transistors are on an annular ring in the centre of the scale chart. Each transistor has a pointer slightly offset so that it may be adjusted to the weight of material in suspension—that is, the material still falling between the feed hopper and the weighing platform. A smaller drum mounted to turn with the indicator has a small slot cut in it which, when it turns, allows the light from a number of small lamps to shine at pre-set weights on to the photo-transistors. By those means the movement of the pointer operates the preset transistors each in turn and the impulses thus produced are transmitted to a control cabinet which in turn controls the feed mechanism, conveyor belts, warning signals and lights, and other mechanical operations. Other machines use transducers.

The effect of transducers is substantially the same as that of photo-transistors, namely to produce an electrical current varying in sympathy with the weight indications. Further explanation is unnecessary except to say that it accomplishes its purpose by mechanical and not by electrical means. The weighing machine, except for the addition of the transducer, remains unchanged, but the impulses from the transducer are conveyed to the associated master control cabinet. In that cabinet the shaft angle of the pointer is converted into a digital code, which is then decoded electronically and is so speeded up that it can follow accurately the varying movements of the scale pointer in either direction. By those means control may be exerted on the feed to the weighing machine, and further circuits may be added and set as required to perform a number of different functions at different weights. By delaying the action, time can be allowed for printing out or, for example, adding small quantities of ingredients that have been weighed on another scale. That combination of weighing machine and control cabinet may be coupled to teleprinters, electrical typewriters and ticket-punching apparatus.

Check Weighing

For check-weighing purposes there are a number of electrically controlled machines. One machine designed for rapid check-weighing and the sorting of packets into three categories—correct, overweight and underweight — has been based on orthodox but modern weighing principles and has been fitted with a travelling belt conveyor driven remotely by electricity, and with photo-transistors for operating the sorting mechanism. Two of the transistors are pre-set to the required plus or minus weights, and are fitted inside the weighing machine. In operation, the packets to be checked are fed on to the travelling weigh belt and are weighed during their passage across to the discharge side. The two internal transistors are actuated according to whether the package is within or without the limit set by either one. If the weight is outside one of the limits an electrical impulse or message is passed to the selector mechanism at the discharge end. As the package reaches the end of the moving belt it passes between a third light and the third transistor. The impulse from that transistor passes to the selector mechanism and releases the message from the first two transistors, upon which the selector mechanism sets the discharge according to the impulse received, and the packets are discharged as required. Coloured lights and counters may be added to the machine. Larger machines, based on the same principle, use the photo-transistors to control the feed to the weigh belt.

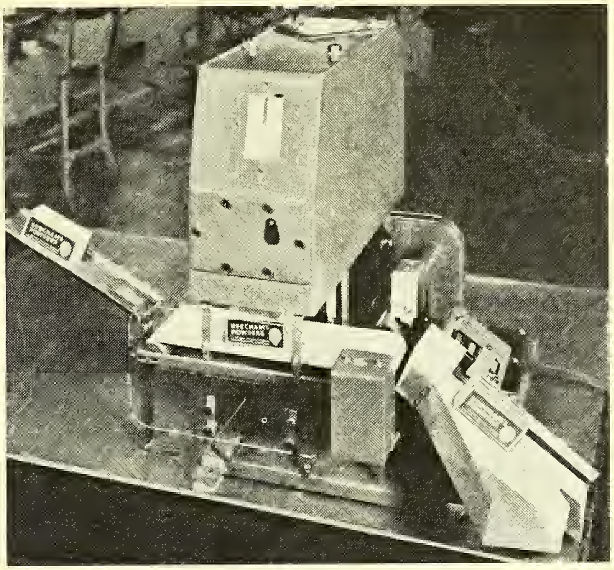
Another machine of the type is a precision weigher stated by the manufacturers to be accurate to within 0·2 per cent. of its nominal range. The machine is easily incorporated into flow packaging and weighing lines and is equipped with electronic controls for feeding back information. The information is retransmitted to control the filling equipment, which may also be placed in line, including control necessary to make corrections for changes in the density and consistency of the material being filled ready for weighing. The mechanism for sorting packets into the three categories (correct, over-weight and shortweight) can be adjusted to the requirements of the user, and counting and recording of the different categories of weights is fully automatic.

Personal Weighing Machines

An article of this kind, written to be of interest to pharmacists, cannot close without some reference to personal weighing machines, the majority of which are to be found in retail pharmacies.

A variety of patterns of weighing machines are available for the purpose, ranging from the machine capable of weighing all age groups down to the "baby weigher." Many, especially those that stand in the entrances to shops, are coin-operated.

Again a statement of the existing law as it affects those machines will be of use and might well be borne in mind when machines of the type are being purchased. The present Weights and Measures Acts and Regulations do not apply to personal weighers, but the Hodgson Committee of Inquiry into Weights and Measures Legislation recommended in its Report (Cmd. 8219), issued in 1951, that "personal weighing machines to which the public has access and which purport to give a weight recording at a nominal charge should unquestionably be regarded as in use for trade and, further, that it is in the public interest that there should be some official guarantee of their accuracy by the institution of the ordinary form of Weights and Measures control." They further recommended "that any personal weighing machine hired out to the public, such as portable baby weighers, shall also be within the scope of the Weights and Measures control." Despite the many years that have elapsed there is still no positive sign of action to implement the recommendations of the Report.



When hand fed the total daily output through this check-weigher was 2,060 dozen (W. & T. Avery, Ltd., Birmingham).

In recent years, however, a number of local authorities have remedied the omission by obtaining local powers in private local Acts. Those local powers have resulted in an improved type of machine giving a better guarantee of accuracy without too much inconvenience or expense to chemists and others. The standard for machines governed by local powers is reasonable and presents little difficulty of achievement by manufacturers.

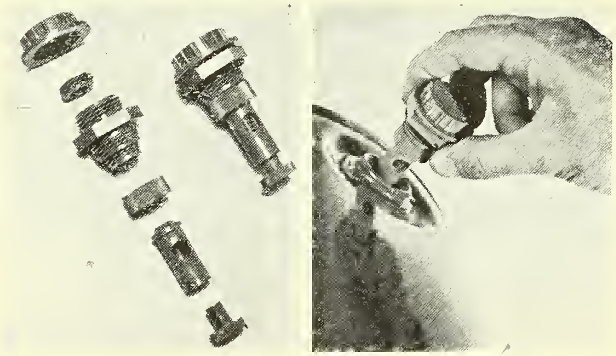
Attention should also be drawn to British Standard Specification No. 1887:1953, which has been drawn up for personal weighing machines.

Those contemplating, now or fairly soon, the purchase of machines for this purpose, should bear in mind the possibility of national legislation in the near future and seek the advice of their local inspector of weights and measures as to whether there are any local powers governing such machines. If there are no local powers, they might obtain a copy of the B.S.I. specification and compare it with the specifications of machines offered to them. Scales complying with the specification or offered by reputable manufacturers will in general satisfy the requirements of local legislation, but assurance should be sought on this point before purchasing.

Finally, nowhere in this article has reference been made to weighing machines incorporating springs. Spring balances and weighing machines using springs to ascertain and indicate weight have a long history of sound construction and usefulness, which, as with all other types of machines, has benefited from the adoption of modern manufacturing techniques. They are used in many trades for many purposes and can be obtained both for regulated and non-regulated trades, but in retail pharmacy such machines are used mainly for personal weighing. The following is a description of their fairly simple construction. The load weight, transmitted either directly or indirectly (by means of levers) to the spring or springs, extends the springs and operates a toothed rack, the teeth of which are engaged in a toothed pinion attached to the pointer or indicator. When the load is placed on the weighing plate or platform the extension of the spring draws down the toothed rack and rotates the pinion and the indicator, thus indicating the weight on the dial. A variety of spring-operated scales are manufactured for the home, hospital, clinic, welfare centre and other places where personal and baby weighing is performed. Some are also designed specially to meet the needs of those on restricted diets. Spring-operated scales, conforming to the British Standard Specification, complying with local by-laws, or of the ordinary pattern and construction, may be obtained if the purchaser wants them.

MACHINERY AND PLANT NOTES

Automatic Weighing. — To meet a growing demand, Elcontrol Ltd., Hitchin, Herts, developed an automatic weighing control equipment. Intended for heavy industrial use, its typical applications include maximum weight control in storage tanks, and control of load on lengths of conveyor. The equipment is suitable for the range of weights normally covered by standard load cells, from 50 lb. up to 1,000 tons or more.

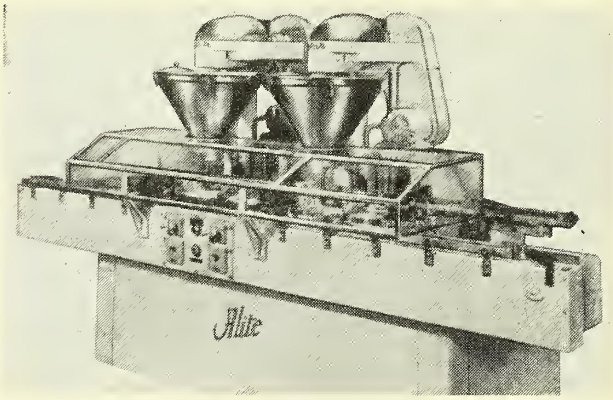

Kerotite reversible drum top (Philips Telescopic Taps, Ltd.).

Leak-proof Tap.—A drip-proof and reversible drum tap which it is claimed can be used with virtually any liquids, including paraffin, trichlorethylene, turpentine and others difficult to handle, is now being marketed by Phillips Telescopic Taps, Ltd., Colliery Road, Birmingham Road, West Bromwich, Staffs. The Kerotite reversible drum tap, which is moulded in Rigidex high density polyethylene, is extremely tough and is resistant to a very wide range of liquids. There are no internal washers or glands to deteriorate and manipulation is by push-button control giving immediate on and off action. In transit, the tap travels with the package either under the filter cap or reversed in $\frac{3}{4}$ in. gas screw fitting, which saves separate freight expense.

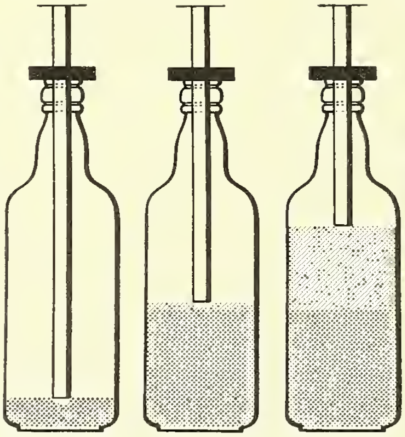
Experimental Plant Hire.—Metering Pumps, Ltd., Ealing, London, W.5, have introduced a plant-hire scheme to enable experimental work in chemical dosing to be carried out and the effectiveness of new processes to be tested in connection with specific uses. The service should save much initial expenditure on precision equipment before a process is fully tested. Plant available under the scheme comprises packaged units of an electrically operated variable-stroke chemical-injection pump, a 20-gall.-capacity rubber-lined mild steel solution tank, polythene delivery tubing, and an injection fitting, all mounted on mild steel frame. During hire, maintenance service is carried out at no additional cost.

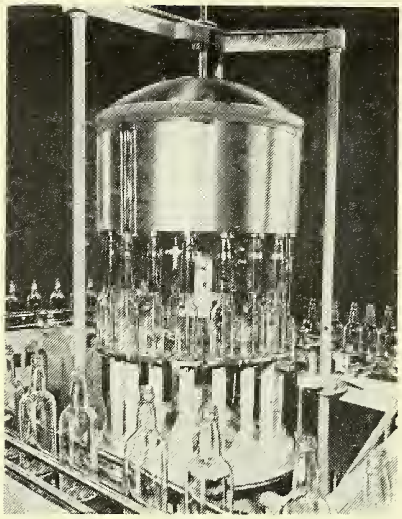
Fluid Filler.—A new high-speed filling machine capable of filling containers from 1 gall. to 2 oz. has been developed by Mather & Platt, Ltd., Park Works, Manchester. Designed on the rotary pump principle, the machine has been designed to accept change parts to cover a wide variety of containers. The filling head is easily adjustable on the main centreshaft, which is of cast iron, but the contact parts may be in bronze or stainless steel to suit the requirements of the material being handled. The range of products that the machine handles is remarkably wide and in general it may be said that the machine will fill any homogeneous fluid with characteristics that allow it to flow through the nozzle and capable of being pumped. In a series of tests on a production line an accuracy better than 0·5 per cent. was obtained when filling oil into 1-gall. cans.

Filling and Lidding.—A new powder filling and press-on lidding machine introduced by Arenco-Alite, Ltd., Pixmore Avenue, Letchworth, Herts, handles tins or composite containers, either oval, round, rectangular or in other odd shapes with capacities from $\frac{1}{2}$ oz. up to 2 lb., at speeds from sixty to 100 per minute. The machine has twin filling heads and weighs approximately thirty-five cwt. The whole top of the unit is enclosed in a sliding-door interlocked Perspex guard.

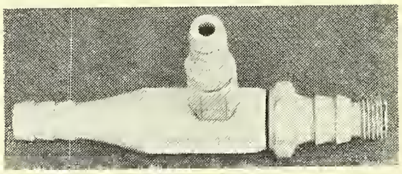


Under-surface Filling.—In the new Horix gravity-vacuum filler the filling tube drops to the bottom of the container at the start of the filling cycle and gradually withdraws, keeping just beneath the surface of the rising liquid. The makers, the J. A. C. Wilkerson Co., 5 Beeches Avenue, Carshalton, Surrey, claim that that arrangement overcomes the problem of filling foaming liquids at speed and also avoids trapping air bubbles when filling viscous liquids that also gives rise to a false "height."


At start of fill tube drops to bottom so that the entering liquid is always below surface of liquid.


The Horix gravity-vacuum filler, overcoming foamy liquid bogy (J. A. Wilkerson Co.).

A New Model.—The new Speedivac water jet pump manufactured by Edwards High Vacuum, Ltd., Manor Royal, Crawley, Sussex, is only $4\frac{1}{2}$ in. in length and incorporates a specially designed stainless steel jet, enabling the pump to give maximum performance even with low water pressures. An integral non-return valve prevents water being sucked back into the vacuum system and two alternative balls are provided, rubber for normal use and a plastic version that will not swell and stick where chemical vapours are being pumped. The finish is in grey epoxy resin baked at a high temperature to give an exceptionally durable surface.



Excellent Attributes.—Easy to install and maintain, yet efficient and economical in the handling of corrosive materials, are some of the features claimed for the cartridge condenser designed by Power Duffryn Carbon Products, Ltd., Springfield Road, Hayes, Middlesex.

Emulsifier. — A hand machine, the Q.P. laboratory emulsifier manufactured by Ormerod Engineers, Ltd., Shawclough, Rochdale, is of robust construction and should find many applications where small batches of preparations are handled.

Semi-automatic.—The Centrac No. 5 filling machine by The Bannister Street Works, Ltd., 18A De Beauvoir Road, London, N.1, is a semi-automatic filler for a wide variety of containers including tins, pots, tubes, bags and sachets.

Hand-operated Printing Machine. — When rolled once over a paper surface, the Roll Boy printing machine prints up to four colours. Made by Van Der Velde, Ltd., 70 Pilgrim Street, Newcastle-on-Tyne, 1, it is hand operated and makes a non-smudge impression.

Economical in Operation. — The Albro filling machines can be easily cleaned, and do not cause spillage or wastage even when filling over 1,000 containers per hour, state the makers of the Albro Fillers & Engineering Co., Ltd., Wharf Road, Ponders End, Middlesex.

Portable Mixer.—The Pioneer mixer, introduced by Premier Colloid Mills, Ltd., Walton-on-Thames, Surrey, is a completely portable unit capable of mixing batches ranging from 25 gall. to 1,000 gall. It can be supplied on a mobile stand, although it is also suitable for clamp mounting.

Hand Pumps. — Made in PVC for acids, alkalis, alcohols, oils, aliphatic hydrocarbons, or water, etc., or in polyamide for organic solvents, esters, ketones, or aromatic and chlorinated hydrocarbons, the carboy and bottle hand pumps supplied by Glen Creston, Ltd., Stanmore, Middlesex, are suitable for any bottle or carboy with a neck opening from ⅞ in. to 2¾ in.

Bottle Unloader. — A new hand-operated bottle unloader handling from six to twenty-four bottles has been introduced by R C A Great Britain, Ltd., Sunbury-on-Thames, Middlesex. The operator merely lowers the unloader over the bottles while they stand in the case. The necks of the bottles are gripped firmly, the operator can then lift the complete assembly and carry the bottles to where required.

Continuous Processing.—Many new continuous processing machines have been introduced for the pharmaceutical and similar industries, and Manesty Machines, Ltd., Speke, Liverpool, 24, can now offer the range developed by W. J. Fitzpatrick & Co., U.S.A. Included are machines for continuous mixing, blending, comminuting, sizing, granulating, milling and pressurised reactions.

Bottle Washing.—A prolonged internal and external high pressure jetting with detergent solution at 140° F., not only ensures that every bottle is thoroughly cleaned, but it also removes all labelling when labelled bottles are being handled, and is the important phase in the Apex Major bottle washing machine manufactured by R. Powley & Sons, Ltd., Sunderland. It is capable of dealing with 1,440 or 2,400 items per hour.

Processing Tanks.—Fibreglass tanks of capacities ranging from 17 to 375 gall. have been produced by Sarena Sinks, Ltd., 57 Islington Park Street, London, N.1. Although normally made in white, the containers can be manufactured in a variety of colours. Special sizes, shapes or capacities can be made to customers' orders and may be supplied with or without drain cocks, expanding or adjustable legs, wheels, etc., and in single or multiple units.

Rust Proofing.—The metal finishing division of the Pyrene Co., Ltd., Great West Road, Brentford, Middlesex, announce that, by arrangement with B.B. Chemical Co., Ltd., they are now marketing the Endurion process as an addition to their established range of Parkerizing rust-proofing finishes for the treatment of ferrous metals. The Endurion process is a simple immersion treatment used in conjunction with Parkerizing zinc-phosphate systems. The coating produced, which is light grey in colour, can be waxed, oiled or painted.

Packaged Plants.—Chemical Engineering Premier, Ltd., Walton-on-Thames, Surrey, have developed small specialised chemical plants involving the use of colloid mills, for the production of dispersions and emulsions. In general, these packaged plants consist of premixing vessels with mixers, mills, pumps, finished product tanks, all mounted on a common base plate. Water and steam pipework is all built-in, as is all the electrical wiring. Those services are then taken to one central point for connection to external services. The method of construction ensures that the first cost virtually covers the complete capital outlay since no hidden extras are involved in assembling the plant.

Labelling Machines.—The new range of Newman labelling machines manufactured by D. Trapow & Co., Ltd., Queen's Road, Barnet, Herts, includes two bench models both capable of outputs up to 40 per minute. The semi-automatic model 24A deals with labels maximum size 7 in. x 5¼ in. on bottles up to quart size. Model 4B automatically labels small bottles, vials, cans and tubes up to 2¼ in. diameter with labels up to 7 in. wide. The minimum of routine maintenance is required by the "Junior" labelling machine, manufactured by Johann Weiss, Berlin, N.65. It has a capacity, that can be varied according to immediate requirements, ranging from 2,000 to 7,200 containers an hour, and can deal with containers varying from 15 to 70 mm. in diameter. Dating and counting devices are incorporated in the machine.

Pipe-line Identification.—Less expensive than painting pipelines in distinctive colours, a new Sellotape pipeline identification tape issued by Gordon & Gotch (Sellotape), Ltd., 8 Paul Street, London, E.C.2, may be used in several ways. Coloured "rings" may be applied at intervals along a pipeline or more detailed information as to contents can be imparted if the "rings" are printed with an abbreviated letter code and/or the British Standard's symbol. Alternatively the name of the contents printed in full, e.g., Air ,Vacuum, Oxygen, etc., brings obvious advantages where staff may not be completely *au fait* with a colour identification system. Where pipes are already painted a white ring printed with black identification wording makes a distinctive, readily seen label. Renewal of rings—which may be only once in two years—is done in a fraction of the time that would otherwise be taken for repainting bands of colour.

PRIZE-GIVING AT LIVERPOOL

Extensions to the college's pharmacy department

THE department of pharmacy, Liverpool College of Technology, held its annual prize-giving on March 16. Mr. S. A. J. Parsons (principal of the College) presided and the prizes were distributed by Mr. H. Humphreys Jones (a former principal of the Liverpool School of Pharmacy). Also present were the assistant director of education, members of the pharmacy advisory committee for the college, officers of local pharmaceutical organisations, representatives of the donors of the prizes and local hospital pharmacists who have assisted in a training scheme whereby each student spends six days in a hospital dispensary. In his report Mr. T. L. Bowyer (head of the department) gave details of extensions to the premises taken over in September 1959. The completed department would then have adequate research and teaching accommodation to permit the development of general and special degree and post-graduate courses. Mr. Bowyer outlined research projects being pursued in all subjects of the course by members of the staff. Mr. Humphreys Jones in presenting the prizes outlined the early history of pharmaceutical education in Liverpool. A vote of thanks to him was proposed by Mr. E. B. Stanley (one of the prize-winners).

Prize-winners

A College associateship with honours was gained by Mr. J. J. Flaherty, and associateships by the Misses V. Lavis-Jones, R. A. Ashcroft and M. Taylor, and Messrs. R. Gould, M. A. Harris, D. H. Hirst, G. R. Miller, E. H. D. O'Brien.

Prizes: *Boots Pure Drug Co., Ltd.:* A. H. Walsh; *Evans Medical, Ltd.* (pharmaceutics): E. B. Stanley; *Timothy Whites & Taylors, Ltd.:* Miss A. M. Sistern and J. J. Flaherty; *Pfizer, Ltd.:* D. M. Hirst; *Ayrton, Saunders & Co., Ltd.* (physiology and pharmacology): J. Lerman; *The British Drug Houses, Ltd.* (pharmaceutics): E. H. D. O'Brien; *Glaxo Laboratories, Ltd.* (pharmaceutical chemistry): Miss R. A. Ashcroft; *Distillers Co. (Biochemicals), Ltd.:* Miss A. M. Sistern.

DUTY ON TABLETS INTO IRELAND

A cancellation move defeated

THE Irish Minister for Health is giving "urgent attention to the establishment of a pharmaceutical control laboratory." That was stated in the Dail on March 29 during the committee stage (passed) of the Imposition of Duties (Confirmation of Orders) Bill.

Mr. T. F. O'Higgins moved an amendment, which was defeated, to cancel the Order imposing a duty on certain imported medicinal tablets. He said that little or no prior consultation had taken place with affected interests. What was involved in the tariff was a major decision to establish a pharmaceutical industry in the Republic, the beginnings of which were there already. One preliminary step that should have been, but was not, taken was the establishment of an independent scientific bureau of standards. It was not yet too late to take that step. The tariff had imposed a tax on the sick by putting up by from 50 to 75 per cent. the costs of medicines. The majority of general practitioners writing a prescription generally asked for the well-known product. The chemist filling the prescription might know that as good a preparation was made in the Republic, but he dare not depart from the prescription, and he sold the medicine from his stock, generally an imported product. People did not know if the Irish product was as good as the imported one, and until they had an independent bureau of standards they would find it difficult to get medical men to use the Irish product. There was no objection to the tariff as such, or to the establishment of an Irish pharmaceutical industry, but the matter had not been handled properly.

A Precedent for the Action Taken

The Minister for Industry and Commerce (Mr. J. Lynch) said that the same course was being taken now as was taken in similar circumstances when Deputy O'Higgins was Minister for Health. The standard in the Republic, and the cost, ex-factory, compared favourably with those in any other country in the world. There had been evidence that some drugs from abroad had been sold in Ireland at a price lower than in their country of origin and that was one of the reasons why the Order was brought in. There had been a number of complaints about the Order at first, but there were, he thought, none from the medical profession, which had made no complaint to his Department. There had been no complaints about the quality, price or availability of Irish tablets, nor about any difficulty in getting other tablets. He agreed that it would be a good thing to establish a bureau of standards, but he did not agree that the bureau would be a necessary prerequisite to the manufacture of tablets in the Republic. The Department of Health had qualified pharmacists and physicians who carried out periodic examinations.

Dr. N. Browne said that the Irish drug industry should get every possible chance to succeed. The average doctor was primarily concerned whether drugs cured the patient or not. There was a compelling case for setting up a bureau of standards that would be independent of the medical profession, the manufacturers and the public. Mr. O'Higgins said the result of establishing an industry in the Republic was that they might isolate themselves from the research taking place elsewhere in the world. Major V. de Valera asked if the purely chemical type of drugs could be tested in the State laboratory?

Mr. F. Loughman (vice-president of the Pharmaceutical Society of Ireland) said that it had been brought home to chemists, who, as a body, had been concerned about the Order, that if the Irish pharmaceutical industry was to be given a chance, it would be necessary to prevent the influx of tremendous quantities of "every drug under the sun." They were assured that any drug which was not manufactured in Ireland could be brought in, under licence, duty free. If an article of the highest quality was manufactured in the Republic he failed to see why the Minister should concede that he should allow in the whole collection of similar drugs.

Mr. Lynch said there were five or six firms manufacturing those drugs. At one stage certain tablets were available in the Republic at a lower price than in the country of origin.

It was in those circumstances that the tariff was imposed, and the home industry manufacturing that product was now progressing satisfactorily. Duties were sometimes imposed to break people of the bad habit of buying imported products so that they might be induced to buy an equally satisfactory home product. He did not dispute the contention that an independent bureau should be set up. There was a bureau in the Department of Health which carried out inspections and analyses. The Minister for Health was giving urgent attention to the establishment of a pharmaceutical control laboratory. He did not think that the medical profession was against him on the matter. There had been no complaint and in the absence of a complaint he assumed that they were with him. If imported tablets or drugs were necessary, the Department of Health could make them available. Any person could order them himself or through his chemist. The prices of the Irish products were comparable, and to cancel the tariff would stunt the growth of the industry and disemploy a number of workers.

A CLUB FOR LEICESTER'S "OLD LAGS"

Present students' announcement at annual reunion

A DRAMATIC development of some kind or another has become almost a routine feature of the annual reunion dinner and dance of the school of pharmacy, Leicester College of Technology and Commerce, held this year on March 31. This year's fruitful suggestion—to set up a Leicester School of Pharmacy Old Students' Club — arose, characteristically enough, not from any "old lag," nor from the staff, but from among the present students. It was expounded at the dinner by Mr. A. Bailey [to whom incidentally any "old lags" who were not present but would like full particulars should write]. Mr. Bailey said the aims of the Club would be to maintain a register of members, including those feminine members who, by getting married, were apt to become unidentifiable by old friends; to circulate the register at least once every two years; to pep up the *Tonic* by associating past and present students in its production; to take over responsibility for the annual reunion (of which the 1960 event, though a coming-of-age, was also the last under its present set-up); to engage in sporting and other contests with present students; and to help financially in students' extra-College activities. Membership would be open to past students of the school, to laboratory staff, to Ph.C. II and B.Pharm. III present students, and to the teaching staff.

At the dinner, at which the head of the school (Mr. Colin Gunn) presided, the toast of the guests was proposed, in accordance with tradition, in a maiden speech, and with a chair as soap-box. The proposer, Mr. Geoffrey Bain, was the school's newest lecturer [in pharmacognosy]. He was introduced as coming from Lancashire but his mastery of dialects could easily have made him of Anglo-Indian or Anglo-Welsh extraction. The response for the guests (among whom was Mr. C. W. Fairbrother, chairman of the local branch of the Pharmaceutical Society) was made by the chairman of the College governors (Alderman C. R. Keene) who praised the pharmacy students as "the most handsome, the most charming and the most hard-working" in the College. The standard of work had risen in the department, in which a fine spirit of loyalty and friendship was evident. Alderman Keene said the first phase had started of a considerable extension to the College, and that one result would be to give the school of pharmacy better and more adequate facilities, including provision for students' social activities.

The toast of the "Old Lags" was proposed by Mr. R. O. Jones (a governor of the school of pharmacy) and acknowledged by Miss Barbara Norris (student 1952-54) who was back in England on leave after two years as a hospital pharmacist in New Zealand. She told present students that they were lucky to have their training in England, though she said "Don't stay in England. Get out and see the world."

Before the company adjourned for dancing, a septette of students, ably instructed and conducted by Mr. Bain, sang three madrigals, including one with words specially and appropriately adapted by the conductor.

The menu cards, made out in facsimile handwriting to Miss Sal Prunella on a replica of an EC10, were signed by Neal Desperandum—the *nom de plume*, it is understood, of their compiler and printer: pharmacy student D. W. E. Simms.

TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

London, April 6: Trading in Crude Drugs during the week continued around recent levels, with only Brazilian Menthol in active demand; holders of spot material increased their quotations by sixpence per lb. to the same level as that asked for shipment.

In Waxes, both the fatty-grey and prime yellow Carnauba were dearer. Cinnamon quills for shipment were slightly easier as were African Ginger and Gum acacia. Madras Turmeric was offered at 107s. 6d. a cwt. against 110s. in the previous week.

In Essential Oils, Lemongrass was easier by three-halfpence per lb. on the spot and by threepence for shipment. Madagascar Clove leaf was marked down by sixpence per lb. but Brazilian Peppermint for shipment advanced by the same amount.

Among Pharmaceutical Chemicals, the B.P. grade of Zinc oxide in 2-ton lots was £115 per ton against £112 10s. last week. Manufacturers of Citric acid advised the trade that they were no longer able to maintain the price that has been ruling since October 1959 when a reduction was forced on them to meet Continental competition. The new schedules for the acid showed a rise of approximately 20s. per cwt. It remains to be seen whether Citrates will rise or not.

Pharmaceutical Chemicals

Acetanilide. — Crystals. One-cwt. lots, 2s. 10d. per lb.; 5-cwt., 2s. 9d.

Adrenaline. — (Per gm.). Synthetic b.p. 1-kilo lots, 11d.; 500 gm., 1s. 1d. acid tartrate, b.p., 1 kilo, 7½d.; 500 gm., 9d.

Aneurine hydrochloride. — 1-kilo, £11 15s.; 10-kilos, £11 7s. 6d. per kilo.

Ascorbic acid.—Onc-kilo, £3 12s.; 10 kilos, £3 10s. per kilo. Sodium ascorbate is offered at the same prices.

Borax.—B.P. grade, 1 ton and upwards; Granular, £56; crystals, £59 10s.; powder, £60 10s.; extra fine powder, £61 10s. per ton, all in hessian sacks. Commercial from £46 to £52 10s. per ton, as to type and packing. Dehydrated borax is £70 per ton in paper-lined hessian bags or £69 in paper bags; carriage paid in Great Britain. Surcharges for smaller quantities: Less than 1 ton but not less than 5 cwt., 1s. per cwt.; 3 cwt., 2s.; 1 cwt., 3s.

Boric acid.—B.P. grade in 1 ton and upwards (per ton): Granular, £91; crystals, £99; powder, £96 10s.; extra-fine powder, £98 10s. per ton in lined hessian bags, carriage paid in Great Britain. Less £1 per ton if supplied in paper bags. Technical from £77 to £86 10s. per ton according to type and packing.

Bromides. — Crystals (per lb.):—

	1 cwt.		5 cwt.	
	s.	d.	s.	d.
Potassium	2	6	2	5
Sodium	2	6	2	5
Ammonium	2	10	2	8½

Powder is three half-pence per lb. more, packages free, carriage paid terms.

Calciferol.—B.P., 3s. 3d. per gm. for 1-kilo lots.

Calcium pantothenate.—£8 per kilo.

Cinchophen.—One-cwt. lots, 21s. per lb.

Citric acid. — Domestic material (in kegs) per cwt. 1–4-cwt. lots, 220s. per cwt. 5-cwt., 216s. In paper bags, 5-cwt. lots are 208s.

Cyanocobalamin.—25-gm. lots, £39 per gm., and 1 gm., £40.

Digoxin. — 100-gm. lots, 78s. per gm. [Corrected note.]

Ether.—Per lb. in winchesters: technical b.s.s., and solvent, 5-cwt. 2s. 7d.; (4s. 1d. per litre). In drums the price is 2s. 2d. per lb. Anæsthetic, b.p., 5-cwt., 3s. 10d.; 10-cwt., 3s. 9d.

Folic acid.—B.P. and u.s.p., 1s. per gm. 1-kilo lots; smaller lots, up to 1s. 6d. per gm.

Glycerin.—Pharmaceutically pure (s.g. 1·2627):

Annual purchases or spot lots of	Under 1 cwt.		1 cwt. and under 5-cwt.		5 cwt. and under 1 ton		1 ton and under 5 tons		5 tons and under 25 tons	
Per Cwt.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Tins										
14-lb.	281	0	276	6	272	6	268	0	265	6
28-lb.	279	0	274	6	270	6	266	0	263	6
56-lb.	275	0	270	6	266	6	262	0	259	6
Drums										
1-cwt.	—		254	6	250	6	246	0	244	6
2½-cwt.	—		251	6	248	0	243	6	242	0
5-cwt.	—		—		247	6	243	0	241	6
10-cwt.	—		—		246	6	242	6	241	0

For 25 tons and upwards the price is from 265s. 6d. to 240s. as to containers. Bulk delivcries in tank wagons from 236s. to 237s. 6d. Technical grade glycerin, s.g. 1·2627, is 5s. per cwt. less than the above.

Guaiacols. — Liquid b.p.c., 16s. per lb. for 1-cwt. lots; crystals, 15s. 9d.; carbonate, 18s.

Hexamine.—B.P., 1s. 11½d. per lb. for 1-ton lots, delivered in 1-cwt. kegs. Technical is threepence per lb. less.

Hyoscine hydrobromide.—Per oz., 102s.

Ichthammol.—B.P. from 2s. to 2s. 6d. per lb. in 1-cwt. lots as to origin and container.

Iron salts.—Gluconate, b.p.c., 6s. 3d. per lb. in 1-cwt. lots; sulphate, b.p. crystals, 9½d. per lb. in 28-lb. lots; 1-cwt., 57s. 6d. per cwt., 5-cwt., 52s. 6d. per cwt.; sulphate exsiccated, 1s. 5d. per lb. for 28-lb., 1-cwt. 123s.; 5-cwt., 113s. per cwt., 1-cwt. fibre kegs free. Other packages extra. phosphate, b.p.c., 28-lb., 3s. 6d. per lb.; 1-cwt., 3s. 3d. phosphate, saccharated, b.p.c., 28-lb. lots are 3s. 9d. per lb.; 1-cwt., 3s. 6d. Oxide, red precipitated, b.p.c., 1949, 1-cwt. 2s. 1d. per lb.; carbonate, saccharated, b.p.c., 1949, 28-lb., 3s. 3d.; 1-cwt., 3s. ammonium citrate, scales, 3s. 6d. per lb. (5-cwt. lots). ammonium sulphate, 1-cwt., 1s. 10d. per lb. quinine citrate, 2s. 1d. per oz. in 100-oz. tin.

Mandelic acid.—One-cwt. lots, 12s. 6d. per lb. Calcium salt also 12s. 6d. Sodium mandelate, 13s. and ammonium mandelate 50 per cent. solution, 7s. 6d.

Menaphthone. — B.P., 170s. per kilo; acetomenaphthone, b.p., 170s.; water-soluble (menadione sodium bisulphite, u.s.p.), 200s. per kilo.

Mercury derivatives.—Quotations (per kilo) for less than 50-kilo lots:—ammoniated, b.p., lump or powder, 57s. 9d.; perchloride, b.p., powder, 49s. 6d. and lump, 50s. 9d.; subchloride (calomel), b.p., 56s. 9d., oxides, yellow, b.p., 60s.; red b.p.c., 1949, 61s. 3d.

Methoin.—B.P., 120s. per lb.

Nicotinamide. — (Per kilo). One-kilo, 61s.; 10 kilos, 59s.; 50 kilos, 57s.

Nicotinic acid. — One-kilo, 39s.; 50-kilos, 36s. per kilo.

Nikethamide.—Per kilo. 100s.

Paraffins. — Prices to wholesale distributors are:—*Liquid:* heavy, b.p., £102 2s. 6d. per ton; light b.p., £84; *Technical White oils,* £75 10s. for the light and £89 for the medium. All in 40–50 gall. returnable loaned drums, delivered U.K. *Soft:* White, medium consistency is £110 15s. per ton and soft consistency £107 7s. 6d. Yellow, £88 10s., all b.p., in non-returnable drums delivered.

Riboflavine. — One kilo, £13 17s. 6d.; 10-kilos, £13 10s. per kilo.

Saccharin.—B.P.C. powder. One lb. and over, 99s. 10d. per lb.; Sodium salt, 80s. 10d. per lb. Prices include duty and carriage.

Salicylamide.—One-cwt., 6s. 9d. per lb.

Terebinth.—B.P., 2s. 3d. per lb.

Theophylline.—50-kilo lots: Alkaloid anhydrous, 34s. 6d. per kilo and b.p. 33s. 3d.; aminophylline, 33s. per kilo.

Vitamin A.—Synthetic. Supplied in concentrate 1 million international units per gm. as acetate or palmitate the price is 9½d. per million i.u.

Vitamin D_2.—In oil, 2 million units per gm. the price is 2d. per million international units. Crystalline: see under calciferol.

Vitamin E (synthetic or natural).—Tocopheryl acetate, b.p.c., 25 gm. to 100 gm., 11d. per gm.; 100 gm. to 1 kilo, 9d. per gm.; 1 kilo and under 10 kilos, £31 5s. per kilo; 10 kilos, £30 10s. per kilo. Equivalent prices for unesterified are: 1s. and 10d. per gm. and £37 and £35 10s. per kilo.

Industrial Chemicals, Solvents

Acetaldehyde. — The 100 per cent. is £122 per ton.

Acetates.—Per ton, spot 1-ton lots: Amyl (technical), £254, and B.S.S., £256. Butyl, £169; Ethyl, £141; Isopropyl, £136.

Acetic anhydride. — 10-ton lots, £126 per ton, delivered U.K. in returnable drums; 1-ton, £128.

Acetone.—One-ton lots spot, £90 per ton in drums.

Benzole. — Thiophene-free, 9s. 3½d. per gall. for one 50-gall. barrel; pure, 6s. 3½d. per gall.

N-Butyl alcohol. — 1–5-ton lots, £159 per ton and one-ton lots, £163 per ton. Secondary, £130.

Carbon tetrachloride. — In 40-gall. drums, 1 ton and under 2 tons, £83 15s.; 4 tons and upwards, £82 5s.

Isopropyl alcohol. — Technical grade (99 per cent.) 5s. 0½d. per gall. for 10,000-gall. lots; anhydrous in drum lots is £108 per ton.

Methyl ethyl ketone. — One-ton lots, £138 10s. per ton.

Naphthalene. — Home market prices (per ton for 4-ton lots at one time):—crude, crystallising point 64–71·9° C., £22 5s. to £23; whizzed, c.p. 72–77·5° C., £27 5s. to £35 15s. according to the crystallising point, ex works; phthalic grade, minimum c.p. 77·5° C., £42 10s. ex maker's works; crystals from £62 10s. to £65, delivered; ball and flake, £71 to £73 10s. delivered.

Phthalates.—Prices (per ton) one-ton lots: Dibutyl, £206; Di-isobutyl, £199; Di-ethyl, £190 10s.; Di-methyl, £182.

Stearates. — Spot prices for minimum 1-ton lots:—Aluminium (all grades), 253s. 6d. per cwt., Calcium (precipitated), 243s. 6d.; Lead (30 per cent.), 223s. 6d.; Magnesium (standard), 272s. and (superfine), 302s.; Zinc, 226s. to 286s. as to grade.

Crude Drugs

Aloes. — Cape primes, spot, 180s. per cwt. quoted; shipment, 172s. 6d., c.i.f. Curaçao, 500s., spot.

Balsams.—Per lb.:—Canada: Spot, 22s. Copaiba: Para from 7s., duty paid. Peru: Spot 9s. 6d. in bond. Tolu (genuine as imported): spot cleared, shipment not offering, small parcel afloat quoted 24s., landed; b.p., 14s. 3d.

Belladonna.—Leaves (t.a. 0·6 per cent.), 2s. 9d. per lb. Dutch for shipment, 2s., c.i.f. Root cleared on the spot.

Benzoin.—Sumatra block, spot £22 to £30 as to quality.

Buchu.—Spot rounds, 3s. 6d. per lb.; shipment, 3s. 1d., c.i.f.

Calabar beans.—Spot, 2s. per lb.

Calamus.—Root, 1s. 2d. per lb., c.i.f.

Calumba.—Root, 100s. per cwt., spot: 87s. 6d., c.i.f.

Camphor.—B.P. powder, 3s. 7½d. per lb. in bond.

Capsicums. — East African nominally 175s. per cwt.

Cascara.—Spot, 295s. per cwt.; prompt shipment, 275s., c.i.f.; 1960 peel, June–July, 220s., c.i.f.

Cassia.—*Fistula*, 115s. per cwt., spot.

Cherry bark. — Thin natural, 1s. 6½d. per lb.; rossed, 1s. 11d.

Cinnamon quills.—Shipment (c.i.f., per lb.) 4 O's, 6s. 0¼d.; 3 O's, 5s. 8½d.; O, 5s. 3d.; quillings, 3s. 4½d.; featherings, 1s. 10¾d.

Cloves.—Zanzibar spot, 2s. 9d. per lb.; shipment, 2s. 5¼d., c.i.f.

Cocillana.—Bark, 2s. per lb., spot.

Colocynth pulp.—Spot, 2s. 6d. per lb.

Digitalis. — *Purpurea* for shipment, 1s. 2½d. to 2s. 6d. per lb., c.i.f., as to test.

Elemi. — Spot from 1s. 10½d. per lb., shipment, 1s. 7d., c.i.f.

Ergot.—Portuguese, 5s. per lb., c.i.f.; spot, 5s. 6d. East European not offering.

Frangula.—Spot, 105s. per cwt.

Gentian. — Spot: French, 155s. per cwt.

Ginger.—African, 140s. per cwt. spot; shipment, 127s. 6d., c.i.f. Jamaican No. 3, spot, 240s. Cochin, shipment, new crop, 150s., c.i.f.

Gum acacia.—Kordofan cleaned sorts, 165s. per cwt., spot; shipment, 147s. 6d., c.i.f.

Ipecacuanha. — Steady. Matto Grosso, 53s. to 55s. 6d. per lb., c.i.f., as to position; Colombian, 54s., c.i.f. Spot Colombian, 55s. 6d.

Juniper berries.—Italian 90s. per cwt., spot.

Karaya. — No. 1 gum, spot 260s. per cwt., No. 2, 230s.

Kola nuts. — Jamaican for shipment, 7d. per lb., c.i.f. African, 5½d. spot and 4d., c.i.f.

Lanolin. — Anhydrous, b.p. is from 170s. to 175s. per cwt. in 1-ton lots and hydrous, b.p., 150s., free drums, delivered.

Lobelia herb. — Spot cleared. American for shipment, 4s. 2d. per lb., c.i.f. Dutch not offering.

Menthol. — Chinese, 67s. 6d. per lb., duty paid as to seller; shipment not offering. Brazilian, 54s. 6d., in bond; 54s. 6d., c.i.f.

Nutmegs. — West Indian 80's 13s. 3d. per lb., spot: sound unassorted, 10s.; defectives, 8s. 6d.

Nux vomica.—Scarce. Shipment, nominal.

Orange peel. — Spot: Sweet ribbon, 2s. per lb.; bitter quarters: best Indian, 1s.; Spanish, 1s. 7d.

Orris root.—Florentine, 340s. per cwt.

Papain.—Tanganyikan, 14s. 6d. per lb., c.i.f., for grade one, spot, 17s. Ceylon, No. 1 white, 14s. 6d., c.i.f.: brown, 13s., c.i.f.

Pepper.—White Sarawak spot 6s. per lb.; shipment, 5s. 7d., c.i.f., as to position. Black Sarawak, 4s. 3d., spot and 4s. 3d., c.i.f. Black Malabar, 500s. per cwt. spot; April–May, 475s., c.i.f.

Peppermint leaves. — Dutch whole, 1s. 11d. to 2s. 7d. per lb., c.i.f.

Pimento. — Spot, 590s. cwt. nominal; shipment, 540s., f.o.b.

Podophyllum. — *Emodi*, 200s. per cwt. spot, and 185s., c.i.f., for shipment. *Peltatum*, spot value, 375s.

Pyrethrum.—Extract, minimum, 25 per cent. w/w pyrethrins, 75s. per lb. for small lots.

Quassia. — Spot, 50s. to 52s. 6d. per cwt., ex wharf.

Quillaia.—Spot whole bark, 115s. per cwt.; crushed, 150s. Whole for shipment, 97s. 6d., c.i.f.

Rhubarb. — Chinese small round from 5s. 9d. to 6s. 9d. per lb. on the spot.

Saffron.—Mancha selecta, 142s. 6d. per lb.

Sarsaparilla.—Jamaican native red on the spot, 2s. 6d. per lb. Shipment, 2s. 1d., c.i.f.

Seeds. — (Per cwt.). Anise.—Bulgarian, 127s. 6d.; Turkish, 132s. 6d.; Spanish, 160s., all duty paid. Caraway. — Dutch unchanged at 152s. 6d., duty paid. Celery.—Indian, 140s., spot; shipment, 120s., c.i.f. Coriander. — Moroccan, 47s. 6d., duty paid; shipment, 38s. 6d., c.i.f. Cumin. — Indian, 235s.; Iranian, 260s., duty paid. Dill.—Indian nominally 100s. spot; shipment, 75s. to 77s. 6d., c.i.f. Fennel.—Chinese, 110s., duty paid; Indian, 125s. Fenugreek. — Moroccan, firm at 52s. 6d., duty paid; shipment quoted at 44s. 6d., c.i.f. Mustard. — English, 82s. 6d. to 97s. 6d., according to quality.

Senega.—Spot, 19s. 6d. per lb.; shipment: small lots at 18s. 9d., c. and f. quoted.

Senna. — *Tinnevelly* leaves, prime No. 1, 1s. 5d. per lb., f.a.q.; No. 3, 9d. Pods: manufacturing (f.a.q.), 10d. and hand-picked, 1s. 6d. to 1s. 10d. *Alexandria* pods: Manufacturing, offered from 1s. 6d. Good hand-picked cleared.

Shellac.—F.O.T.N., 200s. per cwt.; No. 1, 222s. 6d.; F.O., 232s. 6d. to 282s. 6d., spot.

Squill.—White: from 80s. to 85s. per cwt. spot.

Stramonium. — Indian leaves 60s. per cwt., spot. Dutch 0·5 per cent. alkaloid, 93s., c.i.f.

Styrax. — Spot, 33s. per lb., shipment, 32s., c.i.f.

Tonquin beans.—Para spot, 7s. 9d. per lb. Shipment about 7s. c.i.f. Angostura 11s.

Tragacanth. — No. 1 ribbon, £135 to £140 per cwt. No. 2, £125 to £130.

Turmeric. — Madras finger on spot is 107s. 6d. per cwt.; new crop, prompt shipment, 85s., c.i.f.

Valerian root. — Spot: Indian (with rootlets), 130s. and Belgian, 175s. per cwt. Dutch whole (max. 2½ per cent. sand) for prompt shipment, 173s., c.i.f.

Vanillin.—Rates (per lb.) are now:—5-cwt. lots, 23s. 3d.; 1-cwt., 23s. 6d.; 56-lb., 23s. 9d.; smaller quantities, 24s.

Waxes. — (Per cwt.). Bees'—Dar-es-Salaam, spot, 480s.; shipment, 470s., c.i.f. Abyssinian, spot 410s. in bond; shipment, 405s., c.i.f. Benguela, shipment, 380s., c.i.f. Sudanese, spot, 450s.: shipment, 380s., c.i.f. Candelilla, spot, 475s. Carnauba, fatty grey, spot, 570s.; shipment, 550s., c.i.f.: prime yellow, spot, 860s., shipment, 785s., c.i.f.

Essential and Expressed Oils

Amber.—Rectified on the spot, 1s. 6d. per lb.

Arachis.—Spot, 2–5-ton lots naked ex mill, £149 per ton.

Bois de rose.—Brazilian, 15s. 3d. per lb. on the spot and 14s. 9d., c.i.f.

Cajuput.—Spot from 10s. per lb.

Calamus.—Spot, 57s. 6d. per lb.

Camphor, white.—Chinese, 1s. 9d. per lb. in bond.

Cassia. — Spot, 15s. 6d. per lb.; shipment, 15s., c.i.f.

Cedarwood. — American rectified, 5s. per lb. on the spot.

Cinnamon. — From quillings, best English-distilled is 50s. per oz.; other b.p. oils from 165s. per lb. Ceylon leaf, spot, 9s. 9d. per lb.; rectified, 11s. 6d. per lb.; Seychelles, 8s. 6d., spot.

Clove.—Madagascar leaf, spot, 8s. 9d. per lb., duty paid; shipment, 7s. 4d., c.i.f. Rectified 87–88 per cent., 12s. Distilled bud oil, English, b.p., 30s. to 31s.

Coriander.—B.P. oil, 52s. 6d. per lb., spot.

Cubeb.—Small spot supplies of imported are 65s. per lb.; English, 90s.

Dill.—Imported, 27s. 6d. per lb., spot.

Geranium. — Bourbon, 185s. per lb. on the spot.

Gingergrass.—Spot 27s. 6d. per lb.

Grapefruit. — Jamaican, 15s. per lb. spot. Florida, 17s. spot.

Lemon.—B.P. grades from 16s. to 26s. per lb. on the spot. Californian for shipment 25s. to 28s. 6d., c.i.f. Terpeneless, 500s. per lb.

Lemongrass. — Spot, 12s. 10½d. per lb., and shipment, 12s. 9d., c.i.f.

Lime.—West Indian distilled, 51s. per lb. on the spot.

Nutmeg.—Imported b.p. oil is 90s. per lb. English-distilled 100s.

Orange.—Spot quotations of sweet oil include Floridan at 4s. per lb.; West Indian, 5s. 6d.; Israeli, 7s. 6d.

Otto of rose.—Bulgarian, 400s. per oz.

Pennyroyal.—Spot, 15s. per lb., duty paid.

Peppermint. — *Arvensis:* Chinese spot, 37s. 6d. per lb. Brazilian, 17s. spot and shipment, 17s., c.i.f. *Piperita:* Italian "Mitcham-type" from 42s. 6d. to 48s. 6d.; American, 26s. to 30s., as to origin.

Pimento. — English-distilled berry, 167s. 6d. per lb.; imported, 77s. 6d. Rectified leaf 27s. 6d. per lb. for small lots.

Rue.—Spanish is 25s. per lb. spot.

Sandalwood. — Mysore, spot 107s. 6d. to 110s. per lb. East Indian, 107s. 6d. to 110s.

Spearmint.—American oil from 67s. 6d. to 70s. per lb. Chinese, none available.

Tangerine.—From 24s. to 26s. per lb. spot.

Ylang ylang. — Spot, from 37s. 6d. to 46s. per lb. as to grade.

UNITED STATES REPORT

New York, April 5: Crude Glycerin prices were lowered by one cent to make the soap lye 18 cents a lb. and the saponification grade 20 cents. Ascorbic acid was reduced because of competition to $7·50 a kilo, down 50 cents. Lower per lb. among Crude Drugs were Stramonium at 14 cents, down three cents, Peru balsam at $1·15, down ten cents, and Curaçao Aloes at 60 cents, down five cents. Higher per lb. among Essential Oils were Bourbon Vetivert at $17·25, up 75 cents, Patchouli, $6·25, up 75 cents, and Ceylon Citronella, $1·20, up five cents.

CUMULATIVE LIST OF AMENDMENTS TO THE *C. & D.* Quarterly Price List, *March 1*

***=New Product; A=Advanced; R=Reduced**

	1001 (944 PCP)					
	furniture barrier cream		20 0	..	.. **2 6**	
			36 0	..	.. **4 6**	
	Accura 3 (1391 CHB)					
	electric shaver super ..		..	..	.. **210 0**	
	sport ..		..	..	.. **175 0**	
Delete	Aerosporin (208 BW)					
	ointment ..	10 gm	..	..	..	
R	**Adreson** (917 Organon)					
	tablets 5 mgm	.. 40	7 4ea	..		TS
		100	17 4ea	..		TS
		500	77 6ea	..		TS
	25 mgm	.. 20	14 6ea	..		TS
		40	28 6ea	..		TS
		100	69 0ea	..		TS
		500	338 0ea	..		TS
A	**Albion** (339 CG)					
	cotton wool ..	.. ½ oz	4 2	..	..	
		1 oz	5 3	..	..	
		2 oz	8 3	..	..	
		4 oz	13 9	..	..	
		8 oz	23 9	..	..	
		1 lb	3 7¼ea		..	
	Allenbury's (34 A&H)					
	pastilles sugarless	2 oz	15 9	..	.. **1 9**	
	Ampins (399 CG) for bee keepers,					
	box of 3 No 9B ..		4 9ea		.. **6 0**	pl
	5		7 9ea		.. **9 9**	pl
	Andre Philippe (48 AP)					
	liquid shampoo 22	.. 4 oz	10 0	2 6	**1 6**	
	men's lacquer aerosol 101		30 0	15 0	**5 0**	
	Andy (1392 TT)					
	nylon pile beauty mitt		45 6	..	.. **5 11**	
	Anaesthetic Ether Keiths (787 Macfarlan)					
		250 mils	44 0	..	..	
		500 mils	52 0	..	..	
	Arthene (347 Dalmas)	.. 1 oz	20 0	5 0	**2 11**	
		2 oz	23 0	5 9	**3 4**	
	Ascon (37 Allied)	dp 80 oz	29 5ea		..	p1s7
	Aspergum (1330 White)	16	15 4	3 10	**2 2**	
		36	33 0	8 3	**4 6**	
		dp 250	216 0	..	.. **24 0**	
	Auto-Transparol (980 Photopia)					
	photo corners ..	.. 200	..	..	.. **3 2**	
	Ayroware (78 AS&Co)					
	rubber gloves		28 0	1 5	**3 6**	
Delete	Banocide (208 BW)					
	(Vet.), 200 mgm	.. 10	..	..	..	
	Barosil (267 C&A),	dp 1 lb	180 0	..	..	
	Bartex (477 AF&B)					
	superlens sunglasses ..		..	..	.. **7 11**	
					12 9	
					15 11	
	superlens clipovers ..		..	..	.. **7 6**	
	Becovite (1285 Vitamins)					
	tablets	.. 100	40 0	..	.. **5 0**	
		500	160 0	..	.. **20 0**	
		1000	300 0	..	.. **37 6**	
	Bemaphate (142 BML)					
	tablets	.. 25	45 0	..	.. **5 7½**	
		100	147 0	..	..	
	Bemasulph (142 BML)					
	tablets	.. 25	45 0	..	.. **5 7½**	
		dp 100	147 0	..	..	
		dp 500	61 6ea		..	
	Bis-Pep (549 Guest)					
	tablets		6 6	1 7½	**1 3**	
	Bitonin (147 Boots) tonic					
	tablets	.. 36	16 0	..	.. **2 0**	
		72	28 0	..	.. **3 6**	
	Boldoot (639 HH)					
	towelette ..	.. 5	..	..	.. **2 3**	
Delete	Bon-Accord (859 Moore) universal face mask.					
	Bourjois (150 Bourjois)					
	easter egg soap guest ..		..	..	.. **9**	
	bath ..		..	..	.. **1 6**	
	B-R (1023 Radiol)					
	Bone Radiol (horses and dogs) ..	.. 5 oz	94 6	23 7½	**12 6**	
		½ gal	99 0ea	24 9ea	**156 10**	
		1 gal	185 6ea	46 4½ea	**294 0**	
	healing jelly ..	.. 2 oz	19 0	4 9	**2 6**	
	Bronchodil (142 BML)	25	30 0	..	..	s4
		100	105 0	..	..	s4
		500	32 0ca		..	s4
	Broprin (195 Brook Parker)					
	tablets	dp 3×100	7 6	..	..	
Delete	Brovon (859 Moore)					
	bronchial mixture	.. 4 oz				
		dp 80 oz				
	elixir	.. 4 oz				
		dp 20 oz				
	tablets	.. 100				
		dp 500				
	Brownie (711 Kodak)					
	reflex 20 camera ..		..	..	.. **87 2**	
	case		..	..	.. **11 1**	
	Burcillin-P 100 (208 BW)					
	procaine penicillin intra-mammary injection, 100,000 units (Vet)...	12	108 0	..	.. **12 0**	
	Calcium disodium Versenate (1061 Riker)					
	tablets	.. 100	192 0	..	.. **24 0**	
		500	864 0	..	.. **108 0**	
	ampoules 5 mil ..	6	336 0	..	.. **42 0**	
	veterinary solution	100 mils	216 0	..	.. **27 0**	
	Californian Poppy (677 JK)					
	eau de toilette	..7062	28 8	14 0	**4 9**	
	'Pak-a-Soap' (3)	..4824	17 11	4 4	**2 6**	
	Calvert's (219 Calvert)					
	No. 5 carbolic soap, twin bar		10 0	..	.. **1 0**	
	Carbellon (830 Medo) ..	50	18 0	4 6	**2 7½**	
	Carters (1003 PP)					
	little liver pills ..		9 7 4 doz	2 5 4 doz	**4**	
Delete	Cebeviton (676 Johnston)					
	tablets		..	..	..	
	elixir		..	..	..	
*	**Censedal** (814 M&B)					
	tablets 60 mgm	.. 25	18 0	..	.. **2 3**	p1s1s4
		500	220 0	..	.. **27 6**	p1s1s4
	200 mgm	.. 25	40 0	..	.. **5 0**	p1s1s4
		500	560 0	..	.. **70 0**	p1s1s4
A	**Ceraban** (339 CG)					
	diachylon bandage	.. 3 in	58 9	..	.. **6 10½**	
		4 in	76 9	..	.. **9 0**	
Delete	Codasphen (859 Moore)					
	tablets	.. 100				
		dp 500				
Delete	Codella (859 Moore) foam	6 oz				
A	**Cestra** (1073 Robinson)					
	face mask		116 2 gross		.. **12 11** doz	
	Chandau (116 Benton)					
	hair lacquer aerosol ..		39 0	19 6	**6 6**	
	setting spray aerosol ..		39 0	19 6	**6 6**	
	Choice (1388 Durazone)					
	disinfectant ..	5½ oz	11 9	..	.. **1 3**	
		9½ oz	18 9	..	.. **2 0**	
	air purifier aerosol ..		..	..	.. **2 11**	
	fly killer aerosol ..		..	..	.. **2 11**	
	moth proofer aerosol ..		..	..	.. **2 11**	
	Christmas in July (150 Bourjois)					
	skin perfume		..	..	.. **8 6**	
	perfume purse flacon ..		..	..	.. **9 6**	
	presentation		..	..	.. **19 6**	
	"Spray Mist"		..	..	.. **17 6**	
	cologne stick		..	..	.. **5 6**	
	toilet soap	3	..	..	.. **5 9**	
	bath cubes	6	..	..	.. **4 6**	
	talcum		..	..	.. **5 6**	
	cologne		..	..	.. **10 6**	
	Christy (261 Christy)					
	lanolin shampoo ..		5 8	1 5	**9**	
	Ciloprine (768 Cilag)	5 mils	48 0	12 0	**7 0**	
	Clinic (509 Gibbs)					
	medicated shampoo sachet		3 11¾	1 1	**7**	
	bottle		15 2¾	4 1½	**2 3**	
			27 1	7 4	**4 0**	
	Clip-On Roll (888 Newey)					
	hair rollers		10 3	2 6¾	**1 6** card	
	Cobalin (930 P&B)					
	insufflation capsules ..	25	112 0	..	.. **14 0**	
		100	46 0ea		.. **52 0**	
	Outfit		152 0	..	.. **19 0**	
R	**Codelcortone** (837 MSD)					
	tablets 1 mgm	.. 100	9 0ea		..	TS
		500	36 0ea		..	TS
	5 mgm	.. 30	11 0ea		..	TS
		100	32 6ea		..	TS
		500	155 0ea		..	TS
	Codilax (549 Guest) ..		12 6	3 1½	**2 0**	pl
	Cogentin (837 MSD)					
	tablets, 2 mgm	.. 500	130 0ea		.. **195 0**	p1s1s4
A	**Compactoid** (339 CG)					
	boil plasters		8 0	2 0	**1 1½**	
	Compocillin VK (2 Abbott)					
	capsules 125 mgm	.. 500	172 6ea		.. **258 9**	TS
	250 mgm	.. 250	176 4ea		.. **264 6**	TS
		500	343 0ea		.. **514 6**	TS
R	**Cortelan** (518 Glaxo)					
	tablets 5 mgm	.. 50	8 9ea		.. **11 8**	TS
	25 mgm	.. 40	28 6ea		.. **38 0**	TS
		100	69 0ea		.. **92 0**	TS
		500	338 0ea		.. **450 8**	TS
R	Cortisone (837 MSD)					
	acetate tablets 5 mgm	50	8 9ea		..	TS
	25 mgm	40	28 6ea		..	TS
		100	69 0ea		..	TS
		500	338 0ea		..	TS
	Cortisporin (208 BW)					
	lotion	10 mils	135 0	..	.. **15 0**	
R	**Cortistab** (147 Boots)					
	tablets 5 mgm	.. 40	7 0ea		.. **9 4**	TS
		100	17 3ea		.. **23 0**	TS
		500	79 6ea		.. **106 0**	TS

	25 mgm	40	28	6ea		..	**38**	**0**	TS
		100	69	0ea		..	**92**	**0**	TS
		500	338	0ea		..	**450**	**8**	TS
R	**Cortril** (969 Pfizer)								
	intra-articular injection								
	25 mgm/mil	5 mils	..		..	..	**6**	**0**	TS
	ophthalmic ointment								
	0·5%	3 gm	..		..	..	**2**	**0**	TS
	2·5%	3 gm	..		..	..	**4**	**8**	TS
	tablets 10 mgm	25	..		..	..	**9**	**0**	TS
		100	..		..	..	**34**	**6**	TS
	20 mgm	20	..		..	..	**14**	**4**	TS
		100	..		..	..	**69**	**0**	TS
	topical ointment non-greasy								
	0·5%	5 gm	..		..	..	**2**	**0**	TS
		15 gm	..		..	..	**4**	**6**	TS
	1·0%	5 gm	..		..	..	**3**	**3**	TS
		15 gm	..		..	..	**6**	**9**	TS
		50 gm	..		..	..	**18**	**9**	TS
	2·5%	5 gm	..		..	..	**6**	**0**	TS
		15 gm	..		..	..	**14**	**3**	TS
		50 gm	..		..	..	**43**	**6**	TS
	greasy 1·0%	5 gm	..		..	..	**3**	**3**	TS
		15 gm	..		..	..	**6**	**9**	TS
	2·5%	5 gm	..		..	..	**6**	**0**	TS
		15 gm	..		..	..	**14**	**3**	TS
	lotion 0·5%	20 mils	..		..	..	**5**	**0**	TS
	1·0%	20 mils	..		..	..	**8**	**3**	TS
	lotion 0·5% with neomycin	20 mils	..		..	..	**5**	**6**	TS
	1·0%	20 mils	..		..	..	**8**	**9**	TS
	Coryzin (499 Richter)								
	tablets	50	36	0	..	..	**4**	**6**	
		250	12	4ea		..	**18**	**6**	
		500	23	0ea		..	**34**	**6**	
		1000	44	0ea		..	**66**	**0**	
	Coty (301 Coty)								
	cream powder in golden vanity	2099	**61**	**0**	.. **29**	**9**	**10**	**6**	
	foundation lotion	**2 oz**	**37**	**0**	**18**	**0**	**6**	**6**	
	nail enamel "pearlidescent"		**48**	**0**	**23**	**5**	**8**	**9**	
	"super-sheen"		**37**	**0**	**18**	**0**	**6**	**6**	
	remover		**33**	**0**	**16**	**1**	**5**	**9**	
	"vanite parisienne"	**2098**	**84**	**0**	**41**	**0**	**14**	**6**	
	powder refill		**26**	**0**	**12**	**8**	**4**	**6**	
Delete	**special astringent in glass bottle**	**2 oz**	**33**	**0**	**16**	**1**	**5**	**9**	
Delete	**avocado beauty milk in glass bottle**	**4 oz**	**43**	**0**	**21**	**0**	**7**	**6**	
Delete	**skin freshener in glass bottle**	**4 oz**	**37**	**0**	**18**	**0**	**6**	**6**	
Delete	**eye shadow in pink and blue plastic container**		**25**	**0**	**12**	**2**	**4**	**3**	
Delete	**foundation lotion in glass bottle**	**2 oz**	**25**	**0**	**12**	**2**	**4**	**3**	
	Cremotresamide (837 MSD)	**16 oz**	**19**	**0ea**		..	**28**	**6**	
	Cussons (388 Cussons)								
Delete	**musk rose soap**	**2154**	..		..	..			
Delete	**greensleeves luxury soap**	**2085**	..		..	..			
Delete	**four leaf clover luxury soap**	**2083**	..		..	..			
R	**Cytamen** (518 Glaxo)								
	ampoules 100 mcgm 1 mil	6	30	0	..	..	**3**	**4**	
	250 mcgm	6	42	0	..	..	**4**	**8**	
	1000 mcgm	3	60	0	..	..	**6**	**8**	
		6	108	0	..	..	**12**	**0**	
A	**Dalmas** (347 Dalmas)								
	first aid dressings		7	6	..	..		**10½**	
			15	0	..	..	**1**	**9**	
	DCL (378 TDC)								
	yeast tablets gr 5	50	1	6ea		..	**2**	**3**	
		100	2	6ea		..	**3**	**9**	
		1000	20	0ea		..	**30**	**0**	
	Deaner (1061 Riker)								
	tablets	100	264	0	66	0	**38**	**6**	
		500	1080	0	270	0	**157**	**6**	
	Delfen (922 Ortho)								
	with applicator		**76**	**0**	..	..	**9**	**6**	
	tube only		**56**	**0**	..	..	**7**	**0**	
R	**Delta-Cortelan** (518 Glaxo)								
	tablets 1 mgm	100	9	0ea		..	**12**	**0**	TS
		500	36	0ea		..	**48**	**0**	TS
	5 mgm	30	11	0ea		..	**14**	**8**	TS
		100	32	6ea		..	**43**	**4**	TS
		500	155	0ea		..	**206**	**8**	TS
R	**Deltacortone** (837 MSD)								
	tablets 1 mgm	100	9	0ea		..			TS
		500	36	0ea		..			TS
	5 mgm	30	11	0ea		..			TS
		100	32	6ea		..			TS
		500	155	0ea		..			TS
R	**Delta-Cortril** (969 Pfizer)								
	tablets 1 mgm	100	..		..	..	**9**	**0**	TS
		500	..		..	..	**36**	**0**	TS
	5 mgm	20	..		..	..	**7**	**4**	TS
		100	..		..	..	**32**	**6**	TS
		500	..		..	..	**155**	**0**	TS
	intramuscular injection								
	25 mgm/mil	5 mils	..		..	..	**23**	**0**	TS
	enteric-coated tablets								
	2·5 mgm	100	..		..	..	**22**	**6**	TS
		500	..		..	..	**108**	**3**	TS
R	**Deltastab** (147 Boots)								
	injection 25 mgm 5 mil vial		23	0ea		..	**30**	**8**	TS
	tablets 1 mgm	30	2	9ea		..	**3**	**8**	TS
		100	9	0ea		..	**12**	**0**	TS
		500	36	0ea		..	**48**	**0**	TS
	5 mgm	30	11	0ea		..	**14**	**8**	TS
		100	32	6ea		..	**43**	**4**	TS
		500	155	0ea		..	**206**	**8**	TS
R	**Deltastab B** (147 Boots)								
	tablets 5 mgm	30	11	0ea		..	**14**	**8**	TS
		100	32	6ea		..	**43**	**4**	TS
		500	155	0ea		..	**206**	**8**	TS
	Dethlac (506 Gerhardt)		44	0	..	..	**4**	**11**	
	DF 118 (394 Duncan)								
	tablets 30 mgm	25	60	0	..	..	**7**	**6**	s1
		100	200	0	..	..	**25**	**0**	s1
		500	850	0	..	..	**106**	**3**	s1
✱	**Di-Ademil-K** (1176 Squib)								
	tablets	24	3	9ea		..	**5**	**7½**	
		100	14	6ea		..	**21**	**9**	
		500	65	0ea		..	**97**	**6**	
R	**Di-Adreson** (917 Organon)								
	tablets 1 mgm	30	3	2ea		..			TS
		100	9	0ea		..			TS
		500	36	0ea		..			TS
	5 mgm	30	11	0ea		..			TS
		100	32	6ea		..			TS
		500	155	0ea		..			TS
R	**Di-Adreson-F** (917 Organon)								
	tablets 1 mgm	30	3	2ea		..			TS
		100	9	0ea		..			TS
		500	36	0ea		..			TS
	5 mgm	30	11	0ea		..			TS
		100	32	6ea		..			TS
		500	155	0ea		..			TS
A	**Dipasic** (503G) tablets	100	12	0ea		..			TS
		500	54	0ea		..			TS
		1000	96	0ea		..			TS
Delete		5000							TS
	Direma (378 TDC)								
	tablets, 25 mgm	**25**	**5**	**9ea**		..	**8**	**7½**	
		100	**21**	**4ea**		..	**32**	**0**	
		500	**104**	**0ea**		..	**156**	**0**	
	50 mgm	**25**	**10**	**4ea**		..	**15**	**6**	
		100	**39**	**0ea**		..	**58**	**6**	
		500	**189**	**0ea**		..	**283**	**6**	
	Disamide (179 BDH)								
	tablets	**25**	**54**	**0**	..	..	**6**	**9**	
		100	**156**	**0**	..	..	**19**	**6**	
		500	**56**	**0ea**		..	**84**	**0**	
R	**Distivit** (378 TDC) B12								
	ampoules 100 mcgm	5	2	1ea		..	**3**	**1½**	
	250 mcgm	5	2	11ea		..	**4**	**4½**	
	1000 mcgm	5	7	6ea		..	**11**	**3**	
	100 mcgm/mil	5 mil vial	1	11ea		..	**2**	**10½**	
	1000 mcgm/mil	5 mil vial	7	2ea		..	**10**	**9**	
Delete	Distaquaine (208 BW)								
	suspension (vet)								
	300,000 units/mil	**10 mils**	..		..	..			
		30 mils	..		..	..			
	Distaquaine (378 TDC)								
	suspension (vet)	90 mils	36	6ea		..	**54**	**9**	p1TS
	Distaquaine-V (378 TDC)								
	tablets 125 mgm	100	36	6ea		..	**54**	**9**	TS
	Distaquaine V-K (378 TDC)								
	suspension	2 oz	8	10ea		..	**13**	**3**	TS
	Dorminal (147 Boots)								
	tablets, gr. 3	100	66	0	..	..	**8**	**3**	s1s4
	Durophet (1061 Riker) capsules								
	7·5 mgm	30	52	0	..	..	**6**	**6**	**p1s1s4**
		300	344	0	..	..	**43**	**0**	p1s1s4
	12·5 mgm	30	56	0	..	..	**7**	**0**	p1s1s4
		300	372	0	..	..	**46**	**6**	p1s1s4
	20 mgm	30	64	0	..	..	**8**	**0**	p1s1s4
		300	416	0	..	..	**52**	**0**	p1s1s4
	Dylon (816 Mayborn)								
	wash-creme		22	6	..	..	**2**	**6**	
R	**Efcortelan** (518 Glaxo)								
	lotion ¼%	20 mils	3	3ea		..	**4**	**4**	TS
	½%	20 mils	5	0ea		..	**6**	**8**	TS
		100 mils	18	9ea		..	**25**	**0**	TS
	1%	20 mils	8	3ea		..	**11**	**0**	TS
		100 mils	35	6ea		..	**47**	**4**	TS
	intra-articular injection								
	1 mil × 6		8	3ea		..	**11**	**0**	TS
		5 mils	6	0ea		..	**8**	**0**	TS
	ointment Nos. 1 & 2								
	½%	15 gm	4	6ea		..	**6**	**0**	TS
	1%	15 gm	6	9ea		..	**9**	**0**	TS
		50 gm	18	9ea		..	**25**	**0**	TS
	2½%	5 gm	6	0ea		..	**8**	**0**	TS
		15 gm	14	3ea		..	**19**	**0**	TS
		50 gm	43	6ea		..	**58**	**0**	TS
	tablets 20 mgm	100	69	0ea		..	**92**	**0**	TS
R	**Efcortelan-N** (518 Glaxo)								
	eye/ear drops	3 mils	3	7½ea		..	**4**	**10**	TS
	eye ointment	3·5 gm	3	0ea		..	**4**	**0**	TS
	intra-articular injection	5 mils	6	3ea		..	**8**	**4**	TS
	lotion ½%	20 mils	5	6ea		..	**7**	**4**	TS
	1%	20 mils	8	9ea		..	**11**	**8**	TS
	ointment Nos. 1 & 2	5 gm	3	6ea		..	**4**	**8**	TS
		15 gm	7	3ea		..	**9**	**8**	TS
	Elliman's (414 Elliman) (distributor, 994 P&M) " universal " embrocation	3929	47	4	11	10	**6**	**4**	
	Emmotone (571 Stagg)	6 oz	24	0	6	0	**3**	**6**	
		80 oz	20	0ea		..			
	Endoxana (1305 WB)								
	vials 100 mgm	10	40	0ea	10	0ea	**70**	**0**	
	200 mgm	10	53	4ea	13	4ea	**93**	**4**	
	tablets 50 mgm	50	22	0ca	5	6ea	**38**	**6**	
		250	100	0ea	25	0ea	**175**	**0**	
Delete	Enseals (413 Lilly) ferrous sulphate								
	Episol (324 Crookes)								
	lotion	30 mils	36	0	..	..	**4**	**6**	
	cream	30 gm	36	0	..	..	**4**	**6**	
	dusting powder	30 gm	36	0	..	..	**4**	**6**	

	Epitone (147 Boots)	8 oz	26 0	.. ..	**3 9**	
			45 0	.. ..	**6 6**	
	Esidrex K (262 Ciba)					
	tablets	25	54 0	.. ..	**6 9**	
		100	20 0ea	..	**25 0**	
		500	81 4ea	..	**122 0**	
	Ethyl chloride (394 Duncan)					
		100 mils	50 0	.. ..	**6 3**	
*	**Etisul T** (649 ICI) cream	5 gm	32 0	.. ..	**4 0**	
	Eupinal (339 CG)					
	with ephedrine	8 oz	56 0	14 0	**8 4**	
	Evan Williams (437 EW)					
	shampoo cream	tube	18 5	4 7	**2 6**	
	Feedrite (454 Feedrite)					
	polythene bottle	4 oz	11 0	.. ..	**1 4**	
	spare polythene	8 oz	14 0	.. ..	**1 8**	
	Feen-a-Mint (1330 White)	6	7 0	1 9	**1 0**	
		16	15 4	3 10	**2 2**	
	Fennings (1100TS) code correction					
	Ferroids (1061 Riker)	100	80 0	.. ..	**10 0**	
		1000	656 0	.. ..	**82 0**	
*	**Finesse** (327 WC)					
	deodorant spray		28 6	14 3	**4 9**	
	First aid dressing pack					
		(1390 SFA)	18 0	.. ..	**2 0**	
	Fisons (463 Fisons)					
	hedge setter	4 oz	..	.. ..	**5 0**	
		8 oz	..	.. ..	**9 6**	
	Evergreen fertiliser distributor		..	.. ..	**59 6**	
	spot weeder aerosol		..	.. ..	**5 6**	
	Frantin (208 BW) brand					
	dispersible powder (Vet)	250 gm	675 0	.. ..	**75 0**	
	Freemans (479 WF)					
	bathing cap Chic	1B5	21 0	1 0	**2 9**	
	Sea Child	1B7	19 6	1 0	**2 6**	
	Diver	1B6	21 0	1 0	**2 9**	
	Girl	1B8	21 0	1 0	**2 9**	
	Maid	1B4	28 6	2 0	**3 9**	
	Frescabel (726 Lancome)					
	cream	1⅓ oz	..	.. ..	**22 6**	
		2 oz	..	.. ..	**31 6**	
	Frozoclone (365 Demuth)					
	(distributors 261 Christy)		24 0	12 0	**4 0**	
	Frozolavender (365 Demuth)					
	(distributors 261 Christy)		24 0	12 0	**4 0**	
A	Gamgee (1073 Robinson tissue					
	NHS No. 3 pink label	2 oz	5 8¼lb	..	**11½**	
		4 oz	5 1¼lb	..	**1 8½**	
		8 oz	4 9 lb	..	**3 2**	
		16 oz	4 5¾ea	..	**6 0**	
	BPC blue label	2 oz	7 1¾lb	..	**1 2½**	
		4 oz	6 6¾lb	..	**2 2**	
		8 oz	6 2½lb	..	**4 1½**	
		16 oz	5 11¼ea	..	**7 11**	
	yellow label	2 oz	9 0lb	..	**1 6**	
		4 oz	8 5¼lb	..	**2 10**	
		8 oz	8 1 lb	..	**5 4½**	
		16 oz	7 9¾lb	..	**10 5**	
	pneumonia jacket	size 1	24 9	.. ..	**2 9**	
		2	31 3	.. ..	**3 6**	
		3	39 8	.. ..	**4 5**	
		4	51 9	.. ..	**5 9**	
		5	61 6	.. ..	**6 10**	
		6	90 0	.. ..	**10 0**	
	Glo-ahead (1188 Steiner)					
	hair colouriser		..	.. ..	**4 6**	
Delete	Goya (532 Goya) soap bath					
		guest flower				
A	**G.T. 50A** (503G) ampoules					
		5 mils × 5	14 2ea	3 6½ea	**24 9½**	s1
	B	5 mils × 5	14 2ea	3 6½ea	**24 9½**	s1
R	**Harkers** (571 Stagg)					
	disposable enema		24 0	.. 6 0	**3 2**	
	Hazlewood (1393 Hazlewood)		gross	gross		
	soap Easter eggs	4	150 0	37 6	**1 11**	
			gross	gross		
	hand painted chick		80 0	20 0	**1 0**	
	Heparin B.P. (930 P&B)					
	injection vial	1,000 i.u./ml.	42 0	.. ..	**5 3**	
		5,000 i.u./ml.	150 0	.. ..	**18 9**	
		25,000 i.u./ml.	672 0	.. ..	**84 0**	
	Hi-Shine (116 Benton)					
	hair conditioner		39 0	19 6	**6 6**	
	Hormofemin (830 Medo)					
	tablets 0·1 mgm	100	14 0	.. ..	**1 9**	
		250	24 0	.. ..	**3 0**	
		500	36 0	.. ..	**4 6**	
		1000	60 0	.. ..	**7 6**	
	0·3 mgm	100	18 0	.. ..	**2 3**	
		250	32 0	.. ..	**4 0**	
		500	52 0	.. ..	**6 6**	
		1000	90 0	.. ..	**11 3**	
	1·0 mgm	100	22 0	.. ..	**2 9**	
		250	46 0	.. ..	**5 9**	
		500	78 0	.. ..	**9 9**	
		1000	144 0	.. ..	**18 0**	
	5·0 mgm	100	44 0	.. ..	**5 6**	
		250	100 0	.. ..	**12 6**	
		500	186 0	.. ..	**23 3**	
	compound tablets	50	40 0	.. ..	**5 0**	p1s1s4
		100	76 0	.. ..	**9 6**	p1s1s4
		250	168 0	.. ..	**21 0**	p1s1s4
		500	312 0	.. ..	**39 0**	p1s1s4
		1000	600 0	.. ..	**75 0**	p1s1s4
	cream	1 oz	40 0	.. ..	**5 0**	
R	**Hydro-Adreson** (917 Organon)					
	skin lotion 0.5%	20 mils	5 0ea	..		TS
	1.0%	20 mils	8 3ea	..		TS
	skin ointment 0.5%	15 gm	4 6ea	..		TS
		50 gm	11 6ea	..		TS
	1.0%	15 gm	6 9ea	..		TS
		50 gm	18 9ea	..		TS
	2.5%	5 gm	6 0ea	..		TS
		15 gm	14 3ea	..		TS
		50 gm	43 6ea	..		TS
	intra-articular injection					
	25 mg/mil	5 mil	6 0ea	..		TS
R	Hydrocortisone (917 Organon)					
	Ointment					
	0·5%	15 gm	4 6ea	..		TS
	1·0%	15 gm	6 9ea	..		TS
		50 gm	18 9ea	..		TS
	2·5%	5 gm	6 0ea	..		TS
		15 gm	14 3ea	..		TS
	Hydrocortistab (147 Boots)					
	cream 0·5%	5 gm	24 0	.. ..	**2 8**	TS
		15 gm	54 0	.. ..	**6 0**	TS
	1%	5 gm	39 0	.. ..	**4 4**	TS
		15 gm	81 0	.. ..	**9 0**	TS
	2·5%	5 gm	72 0	.. ..	**8 0**	TS
		15 gm	171 0	.. ..	**19 0**	TS
	injection vial					
	25 mgm/mil	5 mils	72 0	.. ..	**8 0**	TS
	lotion 0·25%	20 mils	39 0	.. ..	**4 4**	TS
	0·5%	20 mils	60 0	.. ..	**6 8**	TS
	1%	20 mils	99 0	.. ..	**11 0**	TS
	ointment 0·5%	5 gm	24 0	.. ..	**2 8**	TS
		15 gm	54 0	.. ..	**6 0**	TS
	1%	5 gm	39 0	.. ..	**4 4**	TS
		15 gm	81 0	.. ..	**9 0**	TS
	2·5%	5 gm	72 0	.. ..	**8 0**	TS
		15 gm	171 0	.. ..	**19 0**	TS
	tablets 20 mgm	100	828 0	.. ..	**92 0**	TS
R	**Hydrocortone** (837 MSD)					
	tablets 10 mgm	25	10 0ea	..		TS
		100	38 0ea	..		TS
	20 mgm	25	20 0ea	..		TS
		100	69 0ea	..		TS
	topical ointment 0·5%	15 gm	4 6ea	..		TS
		50 gm	11 6ea	..		TS
	1%	15 gm	6 9ea	..		TS
		50 gm	18 9ea	..		TS
	2·5%	5 gm	6 0ea	..		TS
		15 gm	14 3ea	..		TS
		50 gm	43 6ea	..		TS
	lotion 0·5%	20 mil	5 0ea	..		TS
		120 mil	25 0ea	..		TS
	1%	20 mil	8 3ea	..		TS
		120 mil	44 0ea	..		TS
	injection saline suspension					
		1 mil × 6	8 3ea	..		TS
		5 mil	6 0ea	..		TS
R	**Hydromycin D** (147 Boots)					
	ointment	5 gm	4 9ea	..	**6 4**	TS
		15 gm	12 3ea	..	**16 4**	TS
	lotion	15 mils	12 9ea	..	**17 0**	TS
	ear/eye drops	3 mils	4 9ea	..	**6 4**	TS
	Hydro Saluric K (837 MSD)					
	tablets	25	8 8ea	..	**13 0**	
		100	32 8ea	..	**49 0**	
		500	160 0ea	..	**240 0**	
	Hydrothide (830 Medo)	100	32 8ea	..	**49 0**	
	Hygroton (501 Geigy)					
	tablets 100 mgm	15	9 7ea	2 4¾ea		
		100	57 2ea	14 3½ea		
		500	280 0ea	70 0ea		
	Hypertensin (262 Ciba)					
	ampoules					
	0.5mgm/2 mils	6	16 0ea	4 0ea		
Delete	Hypertane (830 Medo)					
	tablets	500				
		1000				
	compound tablets	500				
		1000				
	Inco-Pads (1073 Robinson)		60 0	.. ..	**6 11**	
	Inecto (1028 Rapidol)					
	colour-cream		40 0	20 0	**6 8**	
	Innoxa (654 Innoxa)					
	Mermaid Pink lipstick		..	.. ..	**5 0**	
	Fire Coral		..	.. ..	**5 0**	
		twin pack	..	.. ..	**9 6**	
	Intimate (1052 Revlon)					
	eau de toilet 0984	2 oz	..	.. ..	**15 6**	
	0985	4 oz	..	.. ..	**27 6**	
	spray mist 0900	4 oz	..	.. ..	**32 6**	
	Intralgin (1061 Riker)					
	liquid	8 oz	80 0	20 0	**11 8**	
		32 oz	236 0	59 0	**34 5**	
	gel	50 gm	40 0	10 0	**5 10**	
*	**Intraval** (814 M&B) sodium					
	suppositories 125 mgm	5	50 0	.. ..	**6 3**	p1s1s4
	250 mgm	5	60 0	.. ..	**7 6**	p1s1s4
	500 mgm	5	80 0	.. ..	**10 0**	p1s1s4
	Ismelin (262 Ciba)					
	tablets 10 mgm	25	8 8ea	2 2ea	**15 2**	
		100	32 4ea	8 1ea	**56 7**	
		500	157 4ea	39 4ea	**275 4**	
	25 mgm	25	20 0ea	5 0ea	**35 0**	
		100	76 4ea	19 1ea	**133 7**	
		500	376 8ea	94 2ea	**659 2**	
	Jertox (1232 T&R)					
	aerosol insecticide		31 6	.. ..	**3 9**	
	Jeyes' (671 Jeyes) fluid	16 oz	22 6	.. ..	**2 6**	
	K2r (890 NC&C)					
	spot lifter		28 0	.. ..	**3 6**	
Delete	Keith's (787 Macfarlan)					
	ether anaesthetic	250 mils	..	.. ..		
		500 mils	..	.. ..		
	Kill Cold (1388 Durazone)		..	.. ..	**4 6**	

	Kirby's (705 Kirby)								
	iron and yeast tonic tablets	80	18	6	4	7½	**3**	**0**	
	Kisby (1067 Roberts)								
	dry shampoo powder ..		21	0	5	3	**2**	**9**	
			50	0	12	6	**6**	**8**	
	Larola (105 Beetham)								
	skin lotion ..	.. 2 oz	15	0	7	6	**2**	**6**	
		3 oz	21	0	10	6	**3**	**6**	
		6 oz	33	0	16	6	**5**	**6**	
	Ledermycin (746 Lederle)								
	capsules 150 mgm ..	16	29	0ea		..	**43**	**6**	
		100	174	2ea		..	**261**	**3**	
		1,000	1,682	4ea		..	**2,523**	**6**	
	Leptovax-Plus (208 BW)								
	(vet)	1 mil × 2	74	3 ...		..	**8**	**3**	TS
	Lignocaine (787 Macfarlan)								
	dental cartridges 2 mils 2%	100	30	2ea		..	**37**	**9**	
	Lignocaine (787 Macfarlan)								
	hydrochloride solution 25 mils 4%		50	0	..	..	**6**	**3**	
Delete	Lignocaine (787 Macfarlan)								
	neothyl ..	100 gm	4	0ea		..			
		500 gm	16	0ea		..			
	Linct. Pholcodin. Co.								
	(579 Hatrick)	..16 oz	90	0	..	..			
		80 oz	420	0	..	..			
	Liquid Satin (654 Innoxa)								
	satin blush		..		..	..	**6**	**9**	
	Little Laxaliver (372 De Witt)								
	pills		13	6	3	4	**1**	**9**	
	Living Curl (1052 Revlon)	7 oz	..		..	..	**12**	**6**	
	Marplan (1074 Roche)								
	tablets 10 mgm ..	50	8	4ea	2	1ea	**14**	**7**	
		250	31	8ea	7	11ea	**55**	**5**	
	Max (855 Mondart)								
	air freshener ..	.. 8 oz	49	6	..	..	**5**	**6**	
	moth proofer ..	.. 8 oz	49	6	..	..	**5**	**6**	
	fly killer ..	.. 8 oz	49	6	..	..	**5**	**6**	
	Max Factor (813 MF)								
	hand cream tube ..		18	0	9	0	**3**	**0**	
	Medac (502 Genatosan)	tube	20	0	10	0	**3**	**6**	
Delete	Medicel (938 PD)								
	suspension ..	16 oz	85	0ea		..			
	Medihaler Cort (1061 Riker)		440	0	..	..	**55**	**0**	
	refill		412	0	..	..	**51**	**6**	
	plastic mouthpiece ..		28	0	..	..	**3**	**6**	
	Medihaler Epi (1061 Riker)		152	0	..	..	**19**	**0**	
	refill		124	0	..	..	**15**	**6**	
	plastic mouthpiece ..		28	0	..	..	**3**	**6**	
	Medihaler Iso (1061 Riker)		152	0	..	..	**19**	**0**	
	refill		124	0	..	..	**15**	**6**	
	forte		176	0	..	..	**22**	**0**	
	refill		148	0	..	..	**18**	**6**	
	plastic mouthpiece ..		28	0	..	..	**3**	**6**	
	Meggeson (831 Meggeson)								
	mixed fruit pastilles "Hurdler" box ..		13	6	..	..	**1**	**6**	
	Melleril (1098 Sandoz)								
	tablets 10 mgm ..	50	40	0	10	0	**5**	**10**	
		250	180	0	45	0	**26**	**3**	
	25 mgm ..	50	66	0	16	6	**9**	**8**	
		250	300	0	75	0	**43**	**9**	
	50 mgm ..	50	126	0	31	6	**18**	**5**	
		250	570	0	142	6	**83**	**2**	
	100 mgm ..	50	240	0	60	0	**35**	**0**	
		250	1080	0	270	0	**157**	**6**	
	Mephyton (837 MSD)								
	emulsion 10 mgm per mil	1 mil 6	30	0ea		..			
	Midicel (938 PD)								
	suspension ..	16 oz	85	0ea		..			
	Mix-A-Shake (621 Horlicks)								
	pkt.	.. 1 oz	57	7	..	..		**6**	
			gross						
	Mixtamycin (378 TDC)								
	solution (vet) ..	90 mils	29	4ea		..	**44**	**0**	TS
	Morphy-Richards (863 MR)								
	electric shaver ..		..	..	10	9ea	**70**	**0**	
	Movol (406 WE) ..		12	0	..	..	**1**	**6**	p2
	Multivite (179 BDH)								
	pellets	.. 150	74	0	..	..	**9**	**3**	
	Mycil (179 BDH)								
	powder		18	0	..	..	**2**	**3**	
	Mycota (147 Boots)								
	powder ..	2½ oz	18	0	..	..	**2**	**3**	
	Nail Dry (797 MSG) ..		75	0	37	6	**12**	**6**	
*	**Narphen** (1154 S&N) ampoules								
	2 mgm/mil ..	.. 10	15	0ea	3	9ea	**26**	**3**	DD
		100	120	0ea	30	0ea	**210**	**0**	DD
	Nebadrene (930 P&B)								
	nebuliser		9	2ea		..	**13**	**9**	
R	**Neobacrin** (518 Glaxo)								
	ointment 3·5 mgm ..		18	0	..	..	**2**	**0**	TS
	15 gm ..		42	0	..	..	**4**	**8**	TS
	Neothyl (787 Macfarlan)								
		100 gm	4	0ea		..			
		500 gm	16	0ea		..			
	Neumandin (147 Boots)								
	tablets, 50 mgm	.. 100	23	0	..	..	**2**	**10½**	
		1000	138	0	..	..	**17**	**3**	
Delete	Noctynol (859 Moore)								
	tablets	.. 12	..		..	..			
		dp 50	..		..	..			
		dp 250	..		..	..			
Delete	Nutinal (147 Boots)								
	tablets 1 mgm	.. 100	..		..	..			
		500	..		..	..			
	Nitoman (1074 Roche)								
	tablets 25 mgm ..	30	6	8ea	1	8ea	**11**	**8**	
		150	26	8ea	6	8ea	**46**	**8**	
		500	66	8ea	16	8ea	**116**	**8**	
	Noradran (897 NC) Bitabs								
		50 doses	84	0	..	..	**10**	**6**	p1
		250 doses	368	0	..	..	**46**	**0**	p1
	Bitabs nocte ..	20 doses	48	0	..	..	**6**	**0**	p1s1s4
		100 doses	210	0	..	..	**26**	**3**	p1s1s4
	inhaler		96	0	..	..	**12**	**0**	
	Norflex (1061 Riker)								
	tablets	.. 100	20	8ea		..	**31**	**0**	
		500	93	0ea		..	**139**	**6**	
	Nuit de Longchamp (Lubin) (1 Abbey)								
	parfum de toilette	.. 1 oz	..		..	..	**17**	**6**	
		2 oz	..		..	..	**30**	**0**	
		4 oz	..		..	..	**45**	**0**	
	Nu-seals (413 Lilly)								
	ferrous sulphate gr 5	dp 100	38	0	..	..	**4**	**9**	
		dp 1000	256	0	..	..	**32**	**0**	
		dp 5000	1220	0	..	..	**152**	**6**	
	Old Spice (1131 Shulton)								
	brushless shaving cream		23	0	5	7	**3**	**6**	
	Omnivite (1285 Vitamins)								
	forte tablets ..	.. 100	15	0ea		..	**22**	**6**	
	Opilon (1278 Veritas)								
	tablets, 5 mgm ..	50	5	3ea		..			
		200	16	4ea		..			
Delete	Page Barker (261 Christy)								
	scurf lotion								
	Paxette (884 NB)								
	electromatic camera ..		..		..	..	**525**	**0**	
	super camera I/L ..		..		..	..	**532**	**6**	
	Paxina (884 NB)								
	electromatic camera ..		..		..	..	**525**	**0**	
	Pectamol (179 BDH)								
	linctus	2 litres	590	0	..	..			
	Penbenemid (837 MSD)								
	suspension ..	.. 2 oz	78	0	..	..	**9**	**9**	
	tablets	.. 12	93	0	..	..	**11**	**7½**	
	Penotrane (1305 WB)								
	silicone cream ..	60 gm	5	0ea	1	3ea	**8**	**9**	
		200 gm	12	0ea	3	0ea	**21**	**0**	
		500 gm	25	0ea	6	3ea	**43**	**9**	
	Pentoxylon (1061 Riker)								
	tablets	.. 25	36	0	..	..	**4**	**6**	
		100	120	0	..	..	**15**	**0**	
		500	528	0	..	..	**66**	**0**	
A	**Pepsodent** (955 Pepsodent)								
	tooth paste		13	9	3	3	**1**	**10**	
			20	1½	4	9½	**2**	**8**	
	Pethidine (394 Duncan)								
	hydrochloride tablets 50 mgm ..	.. 100	78	0	..	..	**9**	**9**	DD
		500	346	0	..	..	**43**	**3**	DD
	Phillips (976 Phillips)								
	toothpaste		20	2	5	0½	**2**	**8**	
Delete	Pholtex.								
	Pholcomed (830 Medo)								
	pastilles ..	.. 30	36	0	..	..	**4**	**6**	p1
		250	240	0	..	..	**30**	**0**	p1
	Pinaud (128 Biometica)								
	Lilac Vegetal ..	.. 8 oz	50	0	25	0	**8**	**4**	
	Plantoid (1396 Plantoid)								
	automatic injector ..		..		..	..	**18**	**9**	
	Pomp (365 Demuth) (distributors 261 Christy)								
	moth proofer aerosol	12 oz	58	6	..	..	**6**	**6**	
	fly killer aerosol	16 oz	81	0	..	..	**9**	**0**	
R	**Predasin** (518 Glaxo)								
	tablets	.. 50	4	3ea		..	**5**	**8**	TS
		500	31	6ea		..	**42**	**0**	TS
R	**Prednelan** (518 Glaxo)								
	tablets 1 mgm	.. 100	9	0ea		..	**12**	**0**	TS
		500	36	0ea		..	**48**	**0**	TS
	5 mgm ..	30	11	0ea		..	**14**	**8**	TS
		100	32	6ea		..	**43**	**4**	TS
		500	155	0ea		..	**206**	**8**	TS
R	**Prednelan-N** (518 Glaxo)								
	intra-articular injection	1 mil × 6	30	0ea		..	**40**	**0**	TS
		5 mils	23	0ea		..	**30**	**8**	TS
R	Prednisolone (938 PD)								
	tablets 1 mgm ..	25	36	0	..	..	**4**	**6**	TS
		100	108	0	..	..	**9**	**0**	TS
		500	432	0	..	..	**36**	**0**	TS
	5 mgm ..	25	110	0	..	..	**13**	**9**	TS
		100	390	0	..	..	**48**	**9**	TS
		500	1860	0	..	..	**232**	**6**	TS
R	Prednisolone (837 MSD)								
	tablets 1 mgm	.. 100	9	0ea		..			TS
		500	36	0ea		..			TS
	5 mgm	.. 100	32	6ea		..			TS
		500	155	0ea		..			TS
R	**Prednisone** (147 Boots)								
	tablets 1 mgm ..	30	2	9ea		..	**3**	**8**	TS
		100	9	0ea		..	**12**	**0**	TS
		500	36	0ea		..	**48**	**0**	TS
	5 mgm ..	30	11	0ea		..	**14**	**8**	TS
		100	32	6ea		..	**43**	**4**	TS
		500	155	0ea		..	**206**	**0**	TS
R	Prednisone (938 PD)								
	tablets 1 mgm ..	25	36	0	..	..	**4**	**6**	TS
		100	108	0	..	..	**9**	**0**	TS
		500	432	0	..	..	**36**	**0**	TS
	5 mgm ..	25	110	0	..	..	**13**	**9**	TS
		100	390	0	..	..	**48**	**9**	TS
		500	1860	0	..	..	**232**	**6**	TS
R	Prednisone (969 Pfizer)								
	tablets 1 mgm	.. 100	..		..	..	**9**	**0**	TS

		500	..		..	..	36	0	TS
	5 mgm	30	..		..	..	11	0	TS
		100	..		..	..	32	6	TS
		500	..		..	..	155	0	TS
R	**Predsol-N** (518 Glaxo)								
	eye/ear drops	3 mils	4	9ea		..	6	4	TS
	lotion 0·1%	20 mils	5	0ea		..	6	8	TS
	0·25%	20 mils	8	9ea		..	11	8	TS
	ointment Nos. 1 & 2								
	0·25%	5 gm	3	0ea		..	4	0	TS
		15 gm	7	3ea		..	9	8	TS
	0·5%	5 gm	4	9ea		..	6	4	TS
		15 gm	12	3ea		..	16	4	TS
	Primodos (973 Pharmethicals)								
	tablets	2	5	0ea		..	7	6	
		20	42	6ea		..	63	9	
Delete	Primodos (973 Pharmethicals)								
	tablets	4	6	2ea		..	9	3	
		40	52	6ea		..	78	9	
	Profenil (324 Crookes)	25	32	0	..	..	4	0	
		100	112	0	..	..	14	0	
		250	256	0	..	..	32	0	
R	**Proladone** (324 Crookes)								
	ampoules 1 mil	6	90	0	..	..	10	0	DDs1
		60	666	0	..	..	74	0	DDs1
	Pulmodrine (830 Medo)								
	syrup	40 oz	20	0ea	5	0ea	35	0	s7
		80 oz	36	0ea	9	0ea	63	0	s7
	Puromyn (218 Calmic)								
	tablets	20	34	0	8	6	4	11½	TS
	Q-tips (1020 Q-tips)	100	8	0	..	..	1	0	
	Quatoral (549 Guest)		15	0	..	..	2	6	p1
	Queen (151 Boutalls)								
Insert	seaside cream		21	0 ..	10	6	3	6	
Delete	hand cream		21	0	10	6	3	6	
			36	0	18	0	6	0	
	Rapidal (830 Medo)	250	15	6ea		..	23	3	p1s1s4
	Rautrax (1176 Squibb)								
	tablets improved	25	9	10ea		..	14	9	
		100	37	4ea		..	56	0	
		500	169	4ea		..	254	0	
	Rauwiloid (1061 Riker)	60	112	0	..	..	14	0	
		500	768	0	..	..	96	0	
	and hexamethonium	100	252	0	..	..	34	0	s1s4
		500	1224	0	..	..	153	0	s1s4
	and **Veriloid**	100	488	0	..	..	61	0	
		500	2192	0	..	..	274	0	
	Retina (711 Kodak)								
	camera IB		..		..	..	813	9	
	IIC		..		..	..	1,046	3	
	IIIC		..		..	..	1,395	0	
	IIS		..		..	..	1,092	9	
	IIIS		..		..	..	1,371	9	
	reflex S		..		..	..	1,813	6	
	Retinette (711 Kodak)								
	camera IIA		..		..	..	651	0	
	Revlon (1052 Revlon)								
	aquamarine fragrance	2 oz	..		..	..	12	6	
		4 oz	..		..	..	21	6	
	spray mist		..		..	..	29	6	
	Robinade (285 Colman)								
	sachet		14	3	..	..		1½	
			gross						
	Robinsons (285 Colman)								
	Sicilian lemon juice	25 oz	41	0	..	..	4	3	
	Roman Holiday (150 Bourjois)								
R	**Roter** (444 FAIR) tablets	40	50	0	12	6	6	10	
		120	144	0	36	0	19	4	
		360	408	0	..	..			
		720	768	0	..	..			
	cologne stick		..		..	..	5	6	
	Rozalex (1088 Rozalex)								
	waterless skin cleanser	tube	22	6	..	..	2	6	
	stain removing cream	tube	31	6	..	..	3	6	
	Rubinstein (596 HR)								
	heart shaped lipstick		62	0	31	0	10	6	
	refill		38	0	19	0	6	6	
	Salupres (837 MSD)								
	tablets	100	20	0ea		..	30	0	
		500	90	0ea		..	135	0	
	Salutone (339 CG)	8 oz	24	0	6	0	3	9	
	Sanipants (339 CG)								
	small or medium		59	6	2	11½	6	11	
	Sanoid (339 CG)								
	first aid outfit refill	A137R	53	3ea		..			
A	**Sanoid** (339 CG)								
	rigid zinc oxide plaster								
		½ in × 1 yd	4	3	..	..		6	
		1 in × 1 yd	5	3	..	..		7½	
		1 in × 3½ yd	13	6	..	..	1	7	
		½ in × 3½ yd	8	6	..	..	1	0	
		½ in × 5 yd	12	6	..	..	1	5½	
		1 in × 5 yd	19	0	..	..	2	3	
		2 in × 5 yd	33	3	..	..	3	10	
		3 in × 5 yd	47	0	..	..	5	6	
		4 in × 5 yd	61	9	..	..	7	3	
		½ in × 10 yd	20	9	..	..	2	4½	
		1 in × 10 yd	32	0	..	..	3	9	
		2 in × 10 yd	59	6	..	..	7	0	
		3 in × 10 yd	83	3	..	..	9	9	
		4 in × 10 yd	104	0	..	..	12	2	
	elastic zinc oxide								
		1 in × 1 yd	11	3	..	..	1	4	
		2 in × 1 yd	17	6	..	..	2	0½	
		1 in × 3 yd	24	6	..	..	2	10½	
		2 in × 3 yd	40	9	..	..	4	9	
✻	**Sanoid** (339 CG) plastic baby pants								
	nylon covered med	D96	46	3	..	..	4	11	
	large		49	0	..	..	5	3	
	Satin Set (1052 Revlon)	7 oz	..		..	..	12	6	
	Scentinel (889 NH)								
	Quiff aerosol		36	0	..	..	3	11	
	Wham aerosol		36	0	..	..	3	11	
	Secto (1123 Secto)								
	ant killer aerosol	5 oz	..		..	..	4	6	
	Silk Film (596 HR)		61	0	31	0	10	6	
	Skin Deep (76 Atkinson)								
	plain or tinted tube		19	7	9	7	3	3	
		jar	39	3	19	2	6	6	
	Skin Thin (774 LR)								
	rubber gloves		..		..	..	4	6	
	Slumba Roll (888 Newey)								
	⅛ in. hair roller		8	4 ..	2	1	1	3	
							card		
	Sodium Versenate (1061 Riker)								
	ampoules 5 mils	6	336	0	..	..	42	0	
	Sooty (331 C of C)								
	shampoo sachets		5	0	1	3		9	
	Spa Brushes (1167 Spa)								
	Dome Cut”								
	streamline with tail-comb	827	36	0	9	0	5	3	
	featherweigbt styling	820	24	0	6	0	3	6	
	“luxury” ladies hair-brush ebony	2106	..		..	..	43	6	
	rosewood		..		..	..	27	0	
	“Guardsman” military brush set	806P	..		..	..	17	0	
	Sparklet (1168 Sparklet) syphons								
	streamline model		792	0	96	6	96	0	
	Hostmaster model		565	0	69	0	68	6	
	“C” bulbs	10	49	6	..	..	5	6	
	HC3 dental sprays		78	0ea	22	10ea	120	4	
	(on prescription)		78	0ea		..	97	6	
	Sprayclean (1388 Durazone)								
	spot remover		..		..	..	3	3	
	Spree (955 Pepsodent)								
	fruit squash sachet		39	0	..	..		4	
			gross						
	Springtime in Paris (150 Bourjois)								
	presentation perfume		..		..	..	17	6	
	purse flacon		..		..	..	7	6	
	spray mist		..		..	..	15	6	
	cologne stick		..		..	..	5	0	
	bath cubes	6	..		..	..	3	6	
	talc		..		..	..	4	6	
	soap	3	..		..	..	3	9	
	Stein (1395 Purser)								
	self-illuminating microscope		88	4ea		..	132		
	Steiner (1188 Steiner)								
	“pearl foam” shampoo								
		packet	..		..	..		10	
		bottle	..		..	..	3	9	
	Stimplete (1352 Wyeth)								
	elixir	4 oz	48	0	..	..	5	4	s1s4
		40 oz	32	6ea		..	43	4	s1s4
	Streptaquaine (378 TDC)								
	5·0 gm/15 mils	single	6	0ea		..	9	0	TS
	1·0 gm/4 mils	5	7	6ea		..	11	3	TS
	5·0 gm/20 mils	single	6	0ea		..	9	0	TS
Delete	Stresscaps (746 Lederle)	30	..		..	..			
Delete	Strix (589 Moore)								
	tablets	dp 500	..		..	..			
	Submarine (555 Haffenden)								
	hot water bottles								
	slumbersound	No. 2	..		..	..	5	3	
		No. 3	..		..	..	5	9	
	slumberdeep	No. 2	..		..	..	5	3	
		No. 3	..		..	..	5	9	
	solafin	No. 3	..		..	..	6	6	
	warmwave	No. 3	..		..	..	6	6	
	safetyglow	No. 3	..		..	..	8	9	
	safetyray	No. 3	..		..	..	8	9	
	Sylvia (339 CG)								
	sanitary towels, size 0	(12)	19	6	..	..	2	1	
	1	(12)	20	9	..	..	2	3	
	1	(6)	10	6	..	..	1	2	
	2	(12)	24	6	..	..	2	8	
	3	(12)	30	6	..	..	3	4	
	maternity	(12)	35	9	..	..	4	0	
	Sympatol (757 Lewis)								
	liquid 10%	20 mils	60	0	..	..	6	8	
		100 mils	270	0	..	..	30	0	
	ampoules 1 mil	6	40	6	..	..	4	6	
		36	146	3	..	..	16	3	
	Synuson (657 IL)								
	tablets	50	56	0	14	0	8	2	s7
Delete	Tabloid (208 BW) benzyl-penicillin								
	10,000 iu (hypodermic)								
	No. 172	10	..		..	..			
	Terpacol (195 Brook Parker)								
		4 oz	3	4ea					
		8 oz	5	10ea					
Delete	Tetride (859 Moore) tablets	16	..		..	..			
		50	..		..	..			
		dp 500	..		..	..			
	Tetritol (436 Evans)								
		250 mils	6	8ea	1	8ea	11	8	
	The Camellia (462 Field)								
	talcum		..		..	..	2	10	
	perfume stick		..		..	..	3	9	
	bathcubes	6	..		..	..	3	0	
	soap	3	..		..	..	3	6	
	Theodrox (1061 Riker)	25	36	0 ..	9	0	5	3	
		100	108	0	..	..			
		1000	856	0	..	..			
	with phenobarbitone	25	40	0	10	0	5	10	p1s1s4
		100	112	0	..	..			p1s1s4
		1000	888	0	..	..			p1s1s4
	Therapas (1154 S&N) code correction								

	Three Flasks (1232 T&R) children's cherry cough syrup ..	2½ oz		12	4	3	1	2	0	
	Tonivitan (830 Medo) capsules ..		..1000	60	0ea	..		90	0	
	Trust (671 Jeyes) toilet roll			..	..	..		1	4	
	Tussinf (195 Brook Parker)	4 oz		2	1ea					
		8 oz		3	3ea					
	Ultima (1052 Revlon) ..	1 oz		..	..	..		14	6	
		2 oz		..	..	..		52	6	
		4 oz		..	..	..		84	0	
	Unic (581 Haynor) battery shaver ..			36	3ea	8	10ea	58	10	
	Vaccination Pads (1295 Wade)			3	8 ..	..			5½	
✻	**Valoid** (208 BW) tablets 50 mgm ..		100	180	0 ..	..		20	0	
	Vandid (1061 Riker) ampoules 5%	2 mils	6	13	0ea	..		19	6	
		5 mils	6	18	0ea	..		27	0	
	Vapules (1367 R&B)	dp 12×10		12	0ea	..				
A	**Variban** (339 CG) elastic adhesive bandage BPC/NHS	2 in×3 yd		40	9 ..	..		4	9	
		2½ in×3 yd		49	9 ..	..		5	10	
		3 in×3 yd		58	9 ..	..		6	10½	
		4 in×3 yd		76	9 ..	..		9	0	
	NHS	2 in×3 yd		38	6 ..	..		4	9	
		2½ in×3 yd		47	9 ..	..		5	10	
		3 in×3 yd		56	9 ..	..		6	10½	
		4 in×3 yd		74	9 ..	..		9	0	
	Vecortenol (262 CIBA)	4 mils		15	8 ..	..		23	6	
		10 mils		35	4 ..	..		53	0	
	Velvet's (1389 Velvet) soft tissues "Four-in-one" pack			..	..	..		2	0	
	Veriloid (1061 Riker) tablets, 1 mgm ..		100	160	0 ..	..		20	0	
			500	720	0 ..	..		90	0	
	2 mgm ..		100	304	0 ..	..		38	0	
			500	1368	0 ..	..		171	0	
	ampoules intravenous, 0·4 mgm/5 mils ..		6	200	0 ..	..		25	0	
	intramuscular, 1 mgm/2 mils ..		6	184	0 ..	..		23	0	
	Veriloid VP (1061 Riker) tablets		100	312	0 ..	..		39	0	p1s1s4
			500	1408	0 ..	..		176	0	p1s1s4
Delete	Versenate (1061 Riker)									
	Viomycin P (378 TDC) 1·0 gm		5	65	5ea	..				TS
✻	**Vita-Glow** (299 CV) ..			78	0 ..	..		9	9	
	Vitorange (549 Guest) tablets			10	0 ..	..		1	3	
				20	0 ..	..		2	6	
R	**Viules** (147 Boots) Hydrocortistab 25mgm/1 mil ..		6	8	3ea	..		11	0	TS
	50 mgm/2 mils ..		6	16	6ea	..		22	0	TS
	Vivomin (324 Crookes)	12 oz		76	6 ..	..		8	6	
	Warm Glow (278 Cole) electric blankets "Juno" ..	50×30 in		43	1½ea	10	5ea	67	11	
	"Sylvia" ..	60×33 in		56	3ea	13	7ea	88	7	
	"Diana" ..	60×51 in		76	10½ea	18	6ea	121	0	
	"Sherbourne"	60×31 in		71	3ea	17	2ea	112	2	
	"Dorchester"	60×51 in		99	4½ea	23	11ea	156	5	
	"Vigilux" single	65×36 in		127	6ea	30	9ea	200	9	
	double	72×58 in		187	6ea	45	2ea	295	2	
	twin	72×58 in		210	0ea	57	7ea	330	7	
Delete	Wellcome (208 BW) diphtheria prophylactic D.T.P.P. ..	1 cc	3							
		10 cc								
Delete	Wellcome (208 BW) blackleg antiserum (vet)	10 mils		..	..	..				
			100	32	6ea	..		43	4	TS
			500	155	0ea	..		206	8	TS
	Wright's (1351 WLU) insect killer aerosol ..			34	9 ..	..		4	0	
	air sweetener aerosol ..			34	9 ..	..		4	0	
	moth proofer aerosol ..			34	9 ..	..		4	0	
	wasp killer			10	3 ..	..		1	7	
	Xylocaine (394 Duncan) viscous	150 mils		100	0 ..	..		12	6	
	Zoflora (1232 T&R) aerosol			31	6 ..	..		3	9	

ADDITIONS TO KEY TO SUPPLIERS:

(2 Abbott) = ABBOTT LABORATORIES LTD., 8 Baker Street, London W.1. Hunter 1381.
(48 AP) = ANDRE PHILIPPE LTD., 16 Cosway Street, N.W.1.
(78 AS&Co) = AYRTON, SAUNDERS & CO., LTD., P.O. Box 38, 34 Hanover Street, Liverpool 1. Royal 8282.
(128 Biometica) = BIOMETICA LTD., Elstree Way, Boreham Wood, Herts. Elstree 1721.
(150 Bourjois) = BOURJOIS LTD., Queens Way, Croydon, Surrey.
(234 Cartwright) = W. B. CARTWRIGHT, LTD., Rawdon, Leeds. Rawdon 713/6.
(299 CV) = COSMETIQUE VIGDOR (LONDRES) LTD., Vigdor House, 40 Lyon Street, London, N.1. North 3114.
(327 WC) = WALTER CROWE LTD., 26 City Road, London, E.C.1. Monarch 4616.
(406 WE) = WILLIAM EDGE & SONS, LTD., Raphael Street, Bolton, Lancs. Higher Bolton 41201.
(463 Fisons) = FISONS LTD., Harvest House, Felixstowe, Suffolk.
(477 AF&B) = ALFRED FRANKS, & BARTLETT CO., LTD., 226 Grays Inn Road, London, W.C.1. Ter. 9865.
(499 Richter) = GEDEON RICHTER (GT. BRITAIN) LTD., Richter House, 14 Weedington Road, N.W.5.
(503 G) = GEISTLICH SONS LTD., Melrose Avenue, Chester. Chester 35118.
(596 HR) = HELENA RUBINSTEIN LTD., 3 Grafton Street, London, W.1. Grosvenor 7501.
(639 HH) = HUNTER HARDY LTD., Dawson Street, Hyde, Cheshire. Hyde 2621.
(654 Innoxa) = INNOXA (ENGLAND) LTD., 1 Eden Street, N.W.1.
(677 JK) = JOSEPHINE KELL, LTD., 24 Old Bond Street, London, W.1. Hyde Park 7353.
(726 Lancome) = LANCOME (ENGLAND) LTD., 14 Grosvenor Street, London, W.1. Hyde Park 6811.
(797 MSG) = MARIA ST. GEORGE LTD., 12 Phillimore Terrace, London, W.8.
(809 M&W) = MATTHEWS & WILSON, LTD., 45 Morrish Road, London, S.W.2. Tulse Hill 5881.
(816 Mayborn) = MAYBORN PRODUCTS LTD., Dylon Works, Berrymans Lane, London, S.E.26. Sydenham 4422.
(830) Medo) = MEDO-CHEMICALS, LTD., 144 Fortess Road, London, N.W.5. Gulliver 3352.
(831 Meggeson)=MEGGESON & CO., LTD., Llewellyn Street, London, S.E.16. Bermondsey 1741.
(884 NB) = NEVILLE BROWN & CO., LTD., 77 Newman Street London, W.1. Langham 7161.
(888 Newey) = NEWEY BROTHERS LTD., Brearley Street, Summer Lane, Birmingham, 19.
(890 NC & C) = NEWTON CHAMBERS & CO., LTD., Thorncliffe, Sheffield. Ecclesfield 3171.
(944 PCP) = P C PRODUCTS, LTD., 33 Union Street, London, S.E.1. HOP 2841.
(1123 Secto) = SECTO LTD., Shaw Street, Blackburn, Lancs.
(1028 Rapidol) = RAPIDOL LTD., Inecto House, 27 Dover Street, W.1.
(1242 Toni) = TONI COSMETICS, Harlequin Avenue, Brentford, Middlesex. Isleworth 4343.
(1272 VB&G) = V. B. & G. PRODUCTS, 16 Queen Street, Leicester. Leicester 59413.
(1278 Veritas) = VERITAS DRUG CO., LTD., 223 Kensington High Street, London, W.8.
(1388 Durazone) = DURAZONE (SALES), LTD., Lovers Walk, Ballards Lane, London, N.3.
(1389 Velvet) = VELVET CREPE PAPER CO., LTD., Alperton, Middlesex.
(1390 SFA) = SAFETY FIRST AID CO., LTD., 12 Duke Street, London, S.W.1.
(1391 CHB) = CHB SUPPLIES, Market Chambers, Market Place, Blackheath, Birmingham.
(1392 TT) = TEDSON THONLEY & CO., LTD., Rochdale, Lancs.
(1393 Hazlewood) = HAZLEWOOD & SONS, LTD., Factory Lane, Derby Road, Widnes, Lancs.
(1395 Purser) = PURSER'S LONDON (HOLBORN) LTD., 12 Fulwood Place, W.C.1.
(1396 Plantoid) = PLANTOIDS LTD., 153 Masons Hill, Bromley, Kent.

WORLD TRADE

Spanish Import Liberalisation.—The Spanish Ministry of Commerce has announced that imports are to be liberalised to 60 per cent. of 1950 imports as from May 1. The latest list of liberalised goods includes shellac; vegetable oils and photographic chemicals.

West Germany and Common Market.—The West German Cabinet on April 5 approved in principle the Hallstein proposals for speeding up tariff cuts in the six-nation European Common Market. Meanwhile, the West German Industries' Federation said recently the speed-up in implementation, which would mean introducing the proposed "tariff wall" round the Common Market next July 1 (eighteen months ahead of schedule) should be conditional on prior achievement of a satisfactory agreement with the "Outer Seven." A West German Economics Ministry spokesman said later that it seemed impossible for the July 1 deadline of the Hallstein proposals to be kept, because of the time the discussions decided on by the Cabinet would take, and for technical reasons.

New Indian Import Policy.—A new Indian import policy for the April–September period, just issued, indicates that the total import bill for the period will be almost the same as in the current period, namely 1,840 million rupees. The basis period for thirty-four items, including natural and synthetic essential oils and coal tar dyes, has been extended.

TRADE MARKS

APPLICATIONS ADVERTISED BEFORE REGISTRATION

From the "Trade Marks Journal," March 30

For photographic chemicals (1)

PHENTRACE, 797,554, by Ilford, Ltd., Ilford, Essex.

For all goods (3)

Device with word SINBAD, 784,682, by Newlands Bros. & Mumford, Ltd., London, W.10. AVANTI, 796,159, by Ashe Laboratories, Ltd., Leatherhead, Surrey. ODEX, 796,160, by Odex, Ltd., Ellesmere Port, Ches.

For non-medicated toilet preparations for the lips (3)

LIPSPIN, 797,688, by Ashe Laboratories, Ltd., Leatherhead, Surrey.

For perfumes, eau de Cologne; and rouge, lipsticks, toilet soap, toilet waters, face powder and talcum powder, all being non-medicated preparations (3)

Device with word NO. 22 CHANEL, 797,375, by Chanel, Ltd., Croydon, Surrey.

PATENTS

(by permission, Controller, H.M. Stationery Office)

COMPLETE SPECIFICATIONS ACCEPTED

From the "Official Journal (Patents)," March 30

Salts of -hydroxy-1:2:5:6-tetrahydrobenzyl-phosphorous acid and a process for their manufacture. Farbwerke Hoechst A.G., vormals Meister Lucius, & Brüning. 835,837.

Antibiotic angolamycin, and its preparation by fermentation, hydrogenation and fission products thereof and salts of these compounds. CIBA, Ltd. 835,886.

α:β-di-[benzoxazolyl-(2)]-ethylenes. CIBA, Ltd. 835,898.

Preparations for protection against light, especially sunlight. K. Thomae, G.m.b.H. 835,749.

Manufacture of alkylated pyrazolopyrimidines. CIBA, Ltd. 835,918.

Process for the manufacture of therapeutic tablet granulations. CIBA, Ltd. 835,932.

Oxytetracycline salt containing compositions. Pfizer Corporation. 835,603.

Process for coating tablets. Merck & Co., Inc. 835,956.

Insulin crystal suspensions having a protracted effect. Novo Terapeutisk Laboratorium, A.S. 835,638.

Biologically active compounds from oleaceae and process for the preparation thereof. Organon Laboratories, Ltd. 835,842.

Production of timed release medicaments. Strong, Cobb & Co., Inc. 835,532.

Sedative and anticonvulsant compositions comprising nitroalcohols. Commercial Solvents Corporation. 835,671.

1,4-pregnadienes and the preparation thereof. Scherico, Ltd. 835,700.

Colloidal powders and method of producing same. Activa Ibera. S.A. 835,738.

Steroid compounds and the preparation thereof. American Cyanamid Co. 835,557.

Heterocyclic sulphonamide compounds. May & Baker, Ltd. 835,753.

Amides. May & Baker, Ltd. 835,755.

Preparation of steroid compounds. Merck & Co., Inc. 835,909.

Alkaloids and process for their manufacture. CIBA, Ltd. 835,791.

Preparation of substituted morpholines. Wyandotte Chemicals Corporation. 835,717.

Production of thiazole compounds. Merck & Co., Inc. 835,599.

Parasympathicolytically active α,α-diphenyl propane derivatives and processes for preparing them. Laboratoria Pharmaceutica Dr. C. Janssen, N.V., and Nederlandsche Combinatie Voor Chemische Industrie, N.V. 835,607.

Sulphonylureas. Merck & Co., Inc. 835,811.

Heterocyclic compounds. May & Baker, Ltd. 835,754.

Derivatives of diphenyl ether and their production. Imperial Chemical Industries, Ltd. 835,823.

Purification of phenoxymethyl penicillin. Distillers Co., Ltd. 835,725.

N-aryl-N^1-alicyclic-para-phenylene diamines. Monsanto Chemical Co. 835,643.

Steroid compounds and the preparation thereof. American Cyanamid Co. 835,558.

Preparation of 1,4-pregnadienes. American Cyanamid Co. 835,836.

Process for the manufacture of corticel steroids and the intermediates thereof. Schering Corporation. 835,845.

Method of producing pharmaceutically active tropinyl ethers. Koninklijke Pharmaceutische Fabrieken Voorheen Brocadesstheeman & Pharmacia, N.V. 835,860.

Thioxanthene derivatives and a process for their preparation. A. Wander, A.G. 835,867.

Quaternary ammonium compounds. General Mills, Inc. 835,678.

Calcium salt of laevulinic acid hydrazone of isonicotinic acid hydrazide. Farbenfabriken Bayer, A.G. 835,683.

Method of producing perpolyphosphates or salt mixtures containing same. Benckiser G.m.b.H., Chemische, J.A. 835,877.

Preparations for the control of plant pests. Farbwerke Hoechst, A.G., vormals Meister, Lucius, & Brüning. 835,546.

Preparation of ethylene bisthiuram disulphide. Shell Research, Ltd. 835,960.

Phytotoxic and insecticidal thiazines and preparations containing them. Philips Glocilampenfabrieken, N.V. 835,850.

Method of absorbing the spray of organic liquids in spraying chambers. CIBA, Ltd. 835,857.

British patent specifications are obtainable (price 3s. 6d. each) from The Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2.

CONTEMPORARY THEMES

Subjects of contributions in current medical and technical periodicals.

Penicillinase treatment of penicillin reaction. *The Practitioner*, April 1960.

Acute poisoning.—A survey of 516 cases. *The Practitioner*, April 1960.

Prochlorperazine in the prophylaxis of migraine. *The Practitioner*, April 1960.

Coriander of Commerce. *J. Pharm. Pharmacol.*, April 1960.

Stability of oily cream B.P. *J. Pharm. Pharmacol.*, April 1960.

Water soluble cellulose derivatives. Uses as primary emulsifying agents. *J. Pharm. Pharmacol.*, April 1960.

Prednisolone. Effect of, in Bancroftian Elephantiasis. *Brit. med. J.*, April 2.

Local analgesic drugs. *Brit. med. J.*, April 2.

The british vaccine industry. *Chemical Products*, April 1960.

Antibiotics. Non-medical uses of. *Chemical Products*, April 1960.

Enteric coatings. *J. Amer. pharm. Ass.*, March 1960.

Colour Stability of tablet formulations. *J. Amer. pharm. Ass.*, March 1960.

Ointment bases. Effect of various ointment bases on the percutaneous absorption of salicylates. *J. Amer. pharm. Ass.*, March 1960.

Glycidic Esters. Synthesis of, as potential antispasmodics. *J. Amer. pharm. Ass.*, March 1960.

Antibiotic activity of haemolytic enterococci. *Lancet*, April 2.

Shikimic acid, Production of, by *Penicillium griseofulvum*. *Nature*, April 2.

Transaminases. Measurement of, in serum. *Nature*, April 2.

2,6-Dichlorobenzonitrile: a new herbicide. *Nature*, April 2.

WILLS

Mr. W. Slater, M.P.S., 19 Redfern Close, Cambridge, left £3,170.

Mr. P. Stirrup, M.P.S., St. Omer, Ashley Road, Parkstone, Dorset, left £8,384 (£8,302 net).

Mr. H. S. Young, M.P.S., Drakes Croft, Marsh Lane, Nantwich, Ches, left £14,750 (£12,457 net).

Mr. H. O. Thomas, M.P.S., Trevethin, Cardigan, Abersychan, Mon., left £21,934 (£21,827 net).

Mr. E. G. Thompson, M.P.S., 85 Wellington Road North, Stockport, left £9,436 (£9,360 net).

Mr. F. E. Trayner, M.P.S., 36 South Drive, Brentwood, Essex, left £2,678 (£2,615 net).

Mr. A. Turnbull, M.P.S., 20 London Road, Luton, Beds, left £5,032 (£1,797 net).

Mr. E. Werge, M.P.S., 240 Grimsby Road, Cleethorpes, Lincs, left £15,968 (£15,805 net).

Mr. G. W. Daykin, M.P.S., 33 Thorncliffe Road, Nottingham, left £32,891 (£32,781 net).

Miss S. Wasdell, M.P.S., Bava House, High Street, Quarry Bank, Staffs, left £22,184 (£17,563 net).

Mr. G. Whitehall, M.P.S., 55 Osborne Street, Bredbury, Ches, left £6,204 (£6,146 net).

COMING EVENTS

Items for inclusion under this heading for inclusion next week should be sent in time to reach the Editor not later than first post on Tuesday.

Monday, April 11

Finchley Branch, Pharmaceutical Society, Bull & Butcher, Whetstone, London, N.20, at 7.30 p.m. Annual meeting and films.

Pesticides Group, Society of Chemical Industry, 14 Belgrave Square, London, S.W.1. at 5.30 p.m. Annual meeting.

Pharmaceutical Packaging Forum, Packaging Centre, 50 Poland Street, London, W.1, at 5.30 p.m. Messrs. B. Moody (United Glass, Ltd.), E. Elliott (Aluminium Development Association, Ltd.), W. R. Lewis (Tin Development Association, Ltd.), on "Glass, Aluminium and Tin in Pharmaceutical Packaging." (In conjunction with the Pharmaceutical Packaging Display at the Centre until May 6).

Plymouth Branch, Pharmaceutical Society, Freedom Fields hospital, Greenbank, Plymouth, at 7.30 p.m. Annual meeting.

Southport Branch, Pharmaceutical Society, Royal hotel, Southport, at 7.45 p.m. Annual meeting.

Tuesday, April 12

Ayrshire Branch, Pharmaceutical Society, Elms Court hotel, Miller Road, Ayr, at 7.30 p.m. Annual meeting.

Doncaster Branch, Pharmaceutical Society, Ivanhoe hotel, Sprotborough, at 8 p.m. Films.

Northampton Branch, Pharmaceutical Society, Corner House café, Wood Hill, Northampton, at 7.30 p.m. Meeting and films.

North London Pharmaceutical Association and Branch, Beale's restaurant, 368 Holloway Road, London, N.7, at 7.45 p.m. Annual meeting.

South-east London Chemists' Association and Branch, New Cross Inn, 323 New Cross Road, London, S.E.14, at 8 p.m. Dr. G. R. Boyes on "Tranquillisers and Tranquillity."

South Shields Pharmacists' Association, King's Assembly rooms, King Street, South Shields. Dinner and annual meeting.

Tunbridge Wells Branch, Pharmaceutical Society, Castle hotel, Tunbridge Wells, at 7.45 p.m. Annual meeting.

West Kent Branch, Pharmaceutical Society, Royal Bell hotel, Bromley, at 8 p.m. Dr. H. Davis (Ministry of Health) on "The Rôle of the Assistant in Pharmacy."

Wednesday, April 13

Biological Methods Group, Society for Analytical Chemistry, Chemical Society, Burlington House, Piccadilly, London, W.1, at 7 p.m. Meeting.

Glasgow and West of Scotland Branch, Pharmaceutical Society, Craig's restaurant, 142a St. Vincent Street, Glasgow, at 7.45 p.m. Annual meeting.

Norwich Branch, Pharmaceutical Society, Assembly house, Theatre Street, Norwich, at 7.30 p.m. Annual meeting.

Wembley Chemists' Association and Branch, Town Hall, Wembley, at 8 p.m. Annual meeting.

Western Pharmacists' Association and Branches, 21 Portman Square, London, W.1, at 7.30 p.m. Sir William Bentley Purchase on "The Experiences of a London Coroner."

Thursday, April 14

Hounslow Branch, Pharmaceutical Society, Sun hotel, Hanworth Road, Hounslow, at 8 p.m. Annual meeting.

Leeds Branch, Pharmaceutical Society, Griffin hotel, Leeds, at 8 p.m. Mr. W. P. Hutchinson on "Elementary Atomic Energy and the Pharmacist."

Northern Scottish Branch, Pharmaceutical Society, Royal hotel, Inverness, at 8 p.m. Mr. G. R. Milne on "The Work of a Blood Transfusion Service."

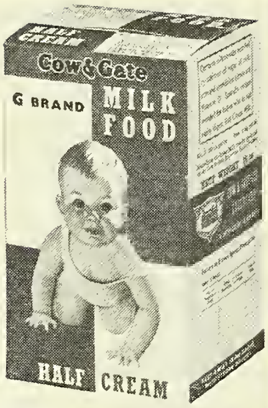
Swansea and West Glamorgan Branch, Pharmaceutical Society, Mackworth hotel, Swansea. Dinner.

Advance Information

Pharmaceutical Packaging Forum, Packaging Centre, 50 Poland Street, London, W.1, at 5.30 p.m., on April 21. Dr. G. Swift (Plastics division, Metal Box Co., Ltd.), and Mr. E. B. Robinson (Robinson's of Chesterfield) on "Plastics, Paper and Board in Pharmaceutical Packaging."

REDESIGNED CARTON: A redesigned pack for Cow & Gate G brand milk food, makers of which are Cow & Gate, Ltd., Guildford, Surrey, is issued in blue for the half-cream and red for the full-cream varieties. Contents and trade terms are unchanged.

BEAUTY MITT: The Andy beauty mitt (see *C. & D.*, February 20, p. 195) is made and distributed by Tedson, Thornley & Co., Ltd., Rochdale, Lancs. It is available in pastel pink and blue shades.



TELEVISION

Figures in the columns represent number of appearances of the product during the week.

April 17–23	London	Midland	North	Scotland	Wales	South	N.E.	Anglia	Ulster
Alka-Seltzer ...	1	1	1	1	1	1	1	1	1
Anadin	5	5	4	1	1	4	5	—	—
André Philippe bubble bath ...	—	—	1	—	—	—	—	—	—
Andrews liver salt ...	—	—	—	—	4	—	3	—	—
Anne French ...	—	1	1	—	—	—	—	—	—
Askit	—	—	—	12	—	—	—	—	7
Aspro	5	—	3	—	5	—	—	—	—
Bisodol	—	1	1	—	—	—	—	—	—
Bronco	—	—	1	—	—	—	—	—	—
Christy's lanoline face pack	3	2	2	3	3	3	2	3	2
Cuticura	—	2	2	—	—	—	—	—	—
Dixor products ...	1	3	—	—	1	—	—	—	—
Ellimans Universal embrocation ...	—	—	—	—	—	—	1	—	—
Euthymol	2	1	1	—	1	—	1	1	—
Evan Williams cream shampoo ...	3	3	3	—	3	3	3	—	—
Formula 21	3	3	3	3	3	3	3	3	3
Freshaire	1	1	1	1	1	—	—	1	1
Fynnon salts ...	1	1	1	1	1	1	2	—	1
Glovelies	—	—	—	—	—	1	—	—	—
Hemotabs	—	—	2	—	—	—	—	—	—
Horlicks	3	4	3	4	3	3	3	1	2
Imperial Leather soap	3	2	3	2	2	2	2	2	2
Kruschen	—	—	3	—	—	—	3	—	3
Marigold baby pants	3	1	—	—	—	—	—	—	—
Marigold gloves ...	2	4	6	—	—	—	—	—	—
Max Factor	3	3	3	3	3	3	3	3	3
Milk of Magnesia ...	1	1	1	2	1	2	2	1	—
tablets	—	2	2	—	—	—	—	—	2
Pepsodent	3	3	3	3	3	3	3	3	3
Phillip's tooth-paste	1	—	—	1	—	—	—	—	—
Placentubex	—	—	—	—	—	4	—	—	—
Rennies	2	2	3	3	3	3	2	2	3
Rinstead pastilles ...	1	1	1	1	2	1	1	—	3
Scentinel Swish ...	—	1	1	—	—	1	1	—	—
Sentor	1	—	—	—	—	—	—	—	—
Silvikrin crm. sham.	3	2	2	2	2	2	3	2	—
Sparkleen	—	—	—	—	—	3	—	—	—
Tru-gel	5	6	5	3	3	3	3	2	2
Winspray products	—	1	—	—	—	1	—	—	—
Yeast-vite	1	2	2	1	2	2	2	2	2

PRINT AND PUBLICITY

PUBLICATIONS

Price Lists

EVANS MEDICAL, LTD., Speke, Liverpool, 24: Druggists' sundries, March 1960.

WARD, BLENKINSOP & CO., LTD., 37 Queen Square, London, W.C.1: Medical products, February 1960.

Booklets and Leaflets

BRITISH OXYGEN CHEMICALS, LTD., Bridgewater House, Cleveland Row, St. James's, London, S.W.1: "Melamine"—1, Pp. 24; "Vandike emulsions"—12, Pp. 19.

DISTILLERS CO., LTD., Devonshire House, Mayfair Place, Piccadilly, London, W.1: "Acetic acid—Storage and Handling of Bulk Supplies," Pp. 24.

MURPHY CHEMICAL CO., LTD., Wheathampstead, St. Albans, Herts: "De-De-Tane D.D.T. emulsion," Pp. 4.

PRESS ADVERTISING

CHARLES BEDEMAN, LTD., 180 Queens Road, London, S.E.15: Deep shampoo treatment. In *Daily Mirror, Woman, Woman's Own, Marty, Mirabelle, Date, She, Honey.*

CUSSONS SONS & CO., LTD., Kersal Vale, Manchester, 7: Imperial Leather soap. In *Woman, Woman's Own* and *Vogue.*

EVER-READY RAZOR PRODUCTS, LTD., 26 Bedford Row, London, W.C.1: Pal Injecto-matic. In *Daily Express, Daily Mirror, Parade, Reveille, Titbits* and *Weekend* April to June.

MAYBORN PRODUCTS, LTD., Dylon Works, London, S.E.26: Dylon wash-creme. In *Woman, Woman's Own, Woman's Day, Woman's Realm, Everywoman, Modern Woman, Woman & Beauty, Woman's Illustrated, She, Sunday Express* and *Sunday Pictorial* from May to August.

NEW HYGIENE, LTD., 266 Holloway Road, London, N.7: Scentinel Swish. In *Woman, Good Housekeeping, Housewife, Homes & Gardens, Everywoman* and *My Home.*

PEPSODENT, LTD., 449 London Road, Isleworth, Middlesex: Model Set. In *Everywoman, Modern Woman, Vogue, Woman & Beauty, Woman, Woman's Realm, Mirabelle, Boyfriend, Valentine* and *Daily Mirror.*

RAYWARP TEXTILES, LTD., Alfred Street North, Nottingham: Headliners. In *Woman's Realm, Woman's Day, She, Woman's Mirror, Vanity Fair, Everywoman, Woman & Beauty.*

WALTER CROWE, LTD., 26 City Road, London, E.C.1: Finesse. In *Woman, Woman's Own, Vogue, Vanity Fair* and *Honey.*

DISPLAY

Showcards

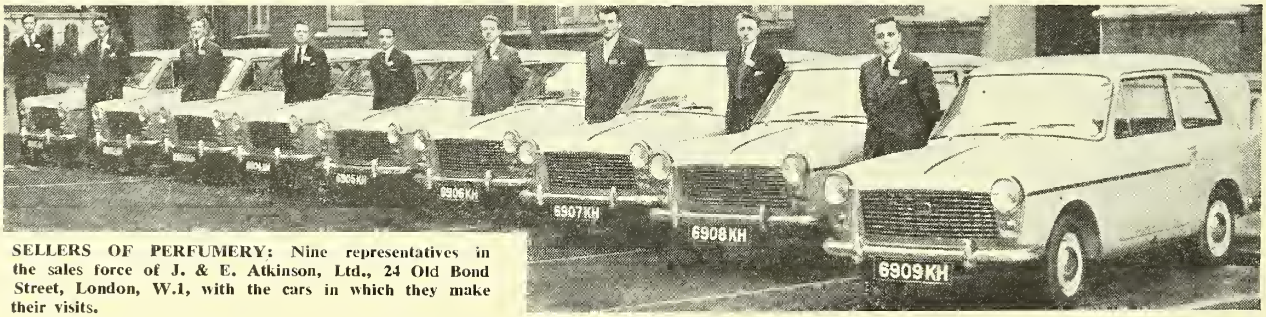
JEYES SALES, LTD., River Road, Barking, Essex: Ibcol showcard in full colour 13¾ x 12 in.

SHOWCARD AND PACK: A showcard for their recently introduced detergent-steriliser, nursery Hysan, has been produced by Trufood, Ltd., 113 Newington Causeway, London, S.E.1. It measures 8½ x 7 in.

MAYBORN PRODUCTS, LTD., Dylon Works, Berryman's Lane, London, S.E.26: Traffic signal display unit for Dylon multi-purpose home dyes; display card with cut-out to hold tube Dylon Wash-creme.

SHULTON (GT. BRITAIN), LTD., 160 Piccadilly, London, W.1: Old Spice showcard, 7½ x 12 in. for after-shave lotion.

Durazone houshold bleach with its new labels. The labels are in three shades of blue on a white ground, and black, with scarlet flash carrying the brand name in white. Makers are Durazone (Sales), Ltd., 96 Stoke Newington High Street, London, N.16.



SELLERS OF PERFUMERY: Nine representatives in the sales force of J. & E. Atkinson, Ltd., 24 Old Bond Street, London, W.1, with the cars in which they make their visits.